DOCUMENT RESUME

EL 117 438 CE 006 087

AUTHOR Byler, Bennie L.
TITLE Analysis of Factors Related to the Educational Plans of Iowa Vocational Agriculture Students.
INSTITUTION Iowa Agricultural and Home Economics Experiment Station, Ames.; Iowa State Univ. of Science and Technology, Ames. Dept. of Agricultural Education.
PUB DATE 75
NOTE 263p.

EDRS PRICE MF-$0.83 HC-$14.05 Plus Postage
DESCRIPTORS *Analysis of Variance; *Aspiration; Career Planning; Data Analysis; *High School Students; Measurement Instruments; Occupational Aspiration; Secondary Education; *Social Influences; Student Characteristics; Tables (Data); *Vocational Agriculture

ABSTRACT

The primary purpose of the study is to determine the educational plans of junior and senior vocational agriculture students and assess factors which may be related to their educational plans on graduation from high school. Information was collected from a sample of 623 students from 30 public high schools which provided vocational agriculture programs in 1974-75. Instruments for collecting data consisted of: (1) personal, family, and community data related to educational and occupational plans of Iowa vocational agriculture students (40 variables); and (2) agribusiness achievement test (four variables). The following educational plans on graduation were identified and studied: (1) those who planned to attend a postsecondary area vocational school (27%), (2) those who planned to attend a four-year college or university (17%), and (3) those who planned to enter the world of work (55.9%). The findings of the study reveal that there are differences in selected factors related to educational decision making among vocational agriculture students grouped according to their stated educational plans upon graduation from high school. A series of 87 tables support the analysis and discussion based on the collected data. Materials related to the conduction of the study are appended. (Author/EC)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED117438

JAN 14 1976

ANALYSIS OF FACTORS RELATED TO THE EDUCATIONAL PLANS OF IOWA VOCATIONAL AGRICULTURE STUDENTS

by

Bennie L. Byler

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ANALYSIS OF FACTORS RELATED TO THE EDUCATIONAL PLANS OF IOWA VOCATIONAL AGRICULTURE STUDENTS

by

Bennie L. Byler

Department of Agricultural Education
Iowa State University
Ames, Iowa

The research reported herein was completed as a part of Project 1879 of the

Iowa Agriculture and Home Economics Experiment Station

Iowa State University
Ames, Iowa

ACKNOWLEDGMENTS

The author of this report wishes to express his appreciation to a number of individuals who have provided much assistance in conducting this project. Sincere thanks go to Tom Archer for his assistance in collecting and analyzing the data for the project. The author would like to thank Winston Haye and Mark Patton for their assistance in scoring and tabulating the data.

Gratitude is extended to the vocational agriculture instructors and students who participated in the study.

The author would also like to express his appreciation to the Agricultural Education Department Staff for their advice and assistance in conducting the project. The author is also grateful to Roy Hickman for providing the technical assistance needed in using the computer facilities to analyze the data.

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Statement of the Problem	2
Purpose of Study	3
Independent Variables	4
Hypotheses	4
REVIEW OF LITERATURE AND RELATED RESEARCH	7
Introduction	7
Educational and Occupational Guidance in Process of Career Development	8
Educational and Occupational Aspirations	10
EXECUTION OF STUDY	18
Design	18
Population	18
Sample	18
Instrumentation	19
Research Procedures	22
Analysis of Data	25
PRESENTATION AND ANALYSIS OF DATA	25
Educational Objectives of Junior and Senior Vocational Agriculture Students	26
Personal, Family and Community Variables Related to the Educational Plans of Vocational Agriculture Students	27
Students' Level of Achievement in Agriculture	115
Relationship of Personal, Family and Community Variables to Agribusiness Achievement Test Scores	127
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	179
Summary of Findings	180
Conclusions	197
Limitations	211
Recommendations	211

TABLE OF CONTENTS

Page

REFERENCES - - -

LIST OF TABLES

		Page
Table 1.	Number of junior and senior students and percentage of combined grade levels grouped by educational plans	27
Table 2.	Chi-square test for relationship between student's grade level and student's educational plans	28
Table 3.	Analysis of variance summary table for number of semesters of vocational agriculture completed, among students who planned to attend a postsecondary area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	30
Table 4.	Means and standard deviations for semesters of vocational agriculture completed by students grouped according to their educational plans	31
Table 5.	Analysis of variance summary table for grades received in vocational agriculture, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	32
Table 6.	Mean responses for types of grades normally received in vocational agriculture by students grouped according to their educational plans	33
Table 7.	Frequencies and percentages for response alternatives to grades normally received in vocational agriculture by students grouped according to their educational plans	35
Table 8.	Analysis of variance summary table for grades in all courses, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	36
Table 9.	Mean responses for types of grades normally received in all courses by students grouped according to their educational plans	37
Table 10.	Frequencies and percentages for response alternatives to grades normally received in all courses by students grouped according to their educational plans	38

LIST OF TABLES

		Page
Table 11.	Chi-square test for relationship among kinds of activities students participated in and students' educational plans	39
Table 12.	Chi-square test for relationship between students' place of residence and students' educational plans	42
Table 13.	Analysis of variance summary table for amount of further education beyond high school planned by student, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	44
Table 14.	Means and standard deviations regarding number of years of further education planned by students, for students grouped by their educational plans	45
Table 15.	Chi-square test for relationship between students' responses regarding extent of working while in high school and students' educational plans	46
Table 16.	Chi-square test for relationship between "significant others" influencing students' occupational choice and students' educational plans	48
Table 17.	Analysis of variance summary table for amount of certainty regarding occupational choice, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	50
Table 18.	Means and standard deviations regarding amount of certainty for occupational choice, for students grouped by their educational plans	51
Table 19.	Analysis of variance summary table for amount of thought given to choice of occupation, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	52
Table 20.	Means and standard deviations regarding amount of thought given to choice of occupation, for students grouped by their educational plans	53

LIST OF TABLES

Page

Table 21. Analysis of variance summary table for student's perception of ability to perform selected occupation, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - 55

Table 22. Means and standard deviations regarding students' perception of ability to perform selected occupation, for students grouped by their educational plans - - - - - - - - - - - - - - - - - - 56

Table 23. Analysis of variance summary table for amount of work experience in occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 57

Table 24. Means and standard deviations regarding amount of work experience in occupation planning to enter, for students grouped by their educational plans - 58

Table 25. Analysis of variance summary table for student's perception of knowledge of occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 59

Table 26. Means and standard deviations regarding students' perception of knowledge of occupation planning to enter, for students grouped by their educational plans - 60

Table 27. Analysis of variance summary table for student's perception of value of high school training for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - - - - - - 61

Table 28. Means and standard deviations regarding students' perception of value of high school training for occupation planning to enter, for students grouped by their educational plans - - - - - - - - - 62

LIST OF TABLES

Page

Table 29. Analysis of variance summary table for student's perception of amount of training high school has provided for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 63

Table 30. Means and standard deviations regarding students' perception of amount of training high school has provided for occupation planning to enter, for students grouped by their educational plans - 64

Table 31. Analysis of variance summary table for amount of encouragement student had received from father to continue education beyond high school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 65

Table 32. Means and standard deviations regarding amount of encouragement student had received from father to continue education beyond high school, for students grouped by their educational plans - - - - - 66

Table 33. Analysis of variance summary table for amount of encouragement student had received from mother to continue education beyond high school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 68

Table 34. Means and standard deviations regarding amount of encouragement student had received from mother to continue education beyond high school, for students grouped by their educational plans - - - - - 69

Table 35. Analysis of variance summary table for amount of encouragement student had received from father to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - - - - 70

LIST OF TABLES

Page

Table 36. Means and standard deviations regarding amount of encouragement student had received from father to attend an area vocational school, for students grouped by their educational plans - - - - 71a

Table 37. Analysis of variance summary table for amount of encouragement student had received from father to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - 71b

Table 38. Means and standard deviations regarding amount of encouragement student had received from father to attend a four-year college or university, for students grouped by their educational plans - 72

Table 39. Analysis of variance summary table for amount of encouragement student had received from mother to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - - - - 74

Table 40. Means and standard deviations regarding amount of encouragement student had received from mother to attend an area vocational school for students grouped by their educational plans - - - - - - - 75

Table 41. Analysis of variance summary table for amount of encouragement student had received from mother to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - 76

Table 42. Means and standard deviations regarding amount of encouragement student had received from mother to attend a four-year college or university, for students grouped by their educational plans - 77

LIST OF TABLES

Page

Table 43. Analysis of variance summary table for amount of encouragement student had received from vo-ag instructor to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - - - - - - 78

Table 44. Means and standard deviations regarding amount of encouragement student had received from vo-ag instructor to attend an area vocational school, for students grouped by their educational plans - - - - 79

Table 45. Analysis of variance summary table for amount of encouragement student had received from vo-ag instructor to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - 81

Table 46. Means and standard deviations regarding amount of encouragement student had received from vo-ag instructor to attend a four-year college or university, for students grouped by their educational plans - 82

Table 47. Analysis of variance summary table for student's perception of value of high school vo-ag courses completed in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - 83

Table 48. Means and standard deviations regarding students' perception of value of high school vo-ag courses completed in preparing for occupation planning to enter, for students grouped by their educational plans - 84

Table 49. Analysis of variance summary table for student's perception of value of FFA program in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university and students who planned to enter the world of work - 85

LIST OF TABLES

Page

Table 50. Means and standard deviations regarding students' perception of value of FFA program in preparing for occupation planning to enter, for students grouped by their educational plans - - - - 86

Table 51. Analysis of variance summary table for student's perception of value of vo-ag courses completed in preparing to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - 87

Table 52. Means and standard deviations regarding students' perception of value of vo-ag courses completed in preparing to attend an area vocational school, for students grouped by their educational plans - - - - 88

Table 53. Analysis of variance summary table for student's perception of value of vo-ag courses completed in preparing to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - 90

Table 54. Means and standard deviations regarding the students' perception of value of vo-ag courses completed in preparing to attend a four-year college or university, for students grouped by their educational plans - 91

Table 55. Analysis of variance summary table for student's perception of value of high school courses completed in preparing to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - - - - - - - - 92

Table 56. Means and standard deviations regarding students' perception of value of high school courses completed in preparing to attend an area vocational school, for students grouped by their educational plans - 93

LIST OF TABLES

Page

Table 57. Analysis of variance summary table for student's perception of value of high school courses completed in preparing to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend four-year college or university, and students who planned to enter the world of work -- 95

Table 58. Means and standard deviations regarding students' perception of value of high school courses completed in preparing to attend a four-year college or university, for students grouped by their educational plans ---------- 96

Table 59. Analysis of variance summary table for student's perception of value of supervised occupational experience program in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work -- 97

Table 60. Means and standard deviations regarding students' perception of value of supervised occupational experience program in preparing for occupation planning to enter, for students grouped by their educational plans ---------- 98

Table 61. Analysis of variance summary table for student's perception of chances of success as student if attended a four-year college or university in animal science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work ---------- 99

Table 62. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in animal science, for students grouped by their educational plans ---------- 100

Table 63. Analysis of variance summary table for student's perception of chances of success as student if attended a four-year college or university in plant and soil science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work -- 102

LIST OF TABLES

Page

Table 64. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in plant and soil science, for students grouped by their educational plans - - - - - - - - - - - - - - - - - 103

Table 65. Analysis of variance summary table for student's perception of chances of success as a student if attended a four-year college or university in agricultural mechanics, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - 104

Table 66. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in agricultural mechanics, for students grouped by their educational plans - 105

Table 67. Analysis of variance summary table for student's perception of chances of success as a student if attended a four-year college or university in agricultural management, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - 106

Table 68. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in agricultural management, for students grouped by their educational plans - - - - - - - - - - - - - - - - - 107

Table 69. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in animal science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - - 109

Table 70. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in animal science, for students grouped by their educational plans - 110

LIST OF TABLES

Page

Table 71. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in plant and soil science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - 111

Table 72. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in plant and soil science, for students grouped by their educational plans - 112

Table 73. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in agricultural mechanics, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - 114

Table 74. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in agricultural mechanics, for students grouped by their educational plans - 115

Table 75. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in agricultural management, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - - - - 116

Table 76. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in agricultural management, for students grouped by their educational plans - 117

Table 77. Analysis of variance summary table for animal science achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work - 118

LIST OF TABLES

		Page
Table 78.	Mean animal science achievement test scores for students grouped by their educational plans	119
Table 79.	Analysis of variance summary table for plant and soil science achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	121
Table 80.	Mean plant and soil science achievement test scores for students grouped by their educational plans	122
Table 81.	Analysis of variance summary table for agricultural mechanics achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	124
Table 82.	Mean agricultural mechanics achievement test scores for students grouped by their educational plans	125
Table 83.	Analysis of variance summary table for agricultural management achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work	126
Table 84.	Mean agricultural management achievement test scores for students grouped by their educational plans	127
Table 85.	Intercorrelations among personal, family, and community variables, and agribusiness achievement test scores	129
Table 86.	Means and standard deviations for personal, family, and community variables	240
Table 87.	Means and standard deviations for agribusiness achievement test scores	245

INTRODUCTION

Youth of today are faced with a tremendous challenge in striving to prepare themselves academically and vocationally for their life's work. Perhaps the most difficult challenges facing high school students are decisions regarding plans for continuing their formal education beyond high school. Upon graduation from high school, they must decide if they want to continue their formal education or enter the world of work and not attend college. If young people elect to attend college, they are faced with the challenge of selecting the appropriate institution which will most adequately prepare them both academically and vocationally for the occupation they are planning to enter.

The vastly changing and complex agricultural industry offers many challenging and rewarding occupations for those students with an interest in pursuing a career in agriculture. Many of the nation's community colleges and four-year institutions have adjusted and expanded their curricula to provide prospective agricultural graduates with a variety of curricular offerings from which to choose.

In recent years there has been a rapidly accelerating growth of agricultural programs in postsecondary area vocational schools in Iowa. The agricultural programs in these area schools have grown considerably with enrollments increasing from 825 in 1965 to 2,437 in the 1974-75 school year (25).

Students of vocational agriculture have been greatly affected by the increased opportunities available to them due to this accelerated growth and expansion of agricultural programs in postsecondary institutions. The task of assisting young people in establishing and attaining their educational and occupational goals becomes increasingly difficult because of the forces which

affect their educational plans. These include; varied opportunities for postsecondary training, influence of peers, parental influence, and attitudes of society which have an influence upon the amount and type of formal education youth may receive.

Instructors of agriculture, administrators, vocational guidance counselors and other teachers must have a keen sense of awareness of the challenges facing youth in assessing their academic and vocational strengths. Assisting these young people in making meaningful and realistic decisions regarding their future educational plans should continue to be a vital concern to educators.

Statement of the Problem

In recent years there has been a rapidly accelerating growth of agricultural programs in postsecondary area vocational schools in Iowa. This increased program expansion has brought about a need to determine the educational goals of junior and senior vocational agriculture students, and factors which may be related to their educational plans upon graduation from high school.

A knowledge of the tentative educational plans of junior and senior vocational agriculture students and an assessment of factors which are related to these educational plans should provide the basis for developing programs, materials and curricular offerings to assist youth in attaining their educational and occupational goals.

The major purpose of this study was to determine the educational plans of junior and senior vocational agriculture students and assess factors which may be related to their educational plans upon graduation from high school.

Purpose of Study

The primary purpose of this study was to determine if there are differences in selected factors related to the educational plans among the following groups of high school students:

Group 1 - Vocational agriculture students who plan to attend a post-secondary area vocational school.

Group 2 - Vocational agriculture students who plan to attend a four-year college or university.

Group 3 - Vocational agriculture students who plan to enter the world of work and not attend college.

The specific objectives of this research were as follows:

A. Determine the educational plans of high school junior and senior vocational agriculture students.

B. Determine if there are differences in selected personal, family and community variables related to educational decision-making, among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

C. Determine if there are differences in level of achievement in agriculture as measured by the Peterson Agribusiness Achievement Test, among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

D. Determine if there is a relationship between selected personal, family, and community variables, and student's achievement in agriculture as measured by the Peterson Agribusiness Achievement Test.

Independent Variables

The following independent variables were identified for this research study:

A. Personal, family and community variables related to educational decision-making.

B. Level of achievement in the follcwing areas of agriculture:

1. Animal science.
2. Plant and soil science.
3. Agricultural mechanics.
4. Agricultural management.

Dependent Variables

The following dependent variables were identified for this study:

A. Planning to enroll in a postsecondary area vocational school upon graduation from high school.

B. Planning to enroll in a four-year college or university upon graduation from high school.

C. Planning to enter the world of work upon graduation from high school and not attend college.

Hypotheses

The research hypotheses identified for this study are as follows:

Hypothesis 1. There will be significant differences in selected personal, family and community variables related to educational decision-making among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school. The variables to be tested were as follows:

1. High school class.
2. Semesters of vocational agriculture completed.
3. Grades received in vocational agriculture.
4. Grades received in all courses.
5. Participation in high school activities.
6. Place of residence.
7. Occupational plans.
8. Years of posthigh school education planned.
9. Work experience while in high school.
10. "Significant others" influencing occupational choice.
11. Amount of certainty regarding occupational choice.
12. Amount of thought given to occupational choice.
13. Ability for occupation planning to enter.
14. Amount of work experience in occupation planning to enter.
15. Knowledge of occupation planning to enter.
16. Value of high school training for occupation planning to enter.
17. Amount of training high school has provided for occupation planning to enter.
18. Amount of encouragement to continue education received from father.
19. Amount of encouragement to continue education received from mother.
20. Amount of encouragement received from father to attend an area vocational school.
21. Amount of encouragement received from father to attend a four-year college or university.
22. Amount of encouragement received from mother to attend a post-secondary area vocational school.
23. Amount of encouragement received from mother to attend a four-year college or university.

24. Amount of encouragement received from vo-ag instructor to attend a postsecondary area vocational school.
25. Amount of encouragement received from vo-ag instructor to attend a four-year college or university.
26. Value of high school vo-ag courses completed in preparing for occupation planning to enter.
27. Value of FFA program in preparing for occupation planning to enter.
28. Value of vo-ag courses completed in preparing to attend a post-secondary area vocational school.
29. Value of vo-ag courses completed in preparing to attend a four-year college or university.
30. Value of high school courses in preparing to attend a post-secondary area vocational school.
31. Value of high school courses in preparing to attend a four-year college of university.
32. Value of supervised occupational experience program in preparing for occupation planning to enter.
33. Chances of success as student attending a four-year college or university in animal science.
34. Chances of success as student attending a four-year college or university in plant and soil science.
35. Chances of success as student attending a four-year college or university in agricultural mechanics.
36. Chances of success as a student attending a four-year college or university in agricultural management.
37. Chances of success as a student attending a postsecondary area vocational school in animal science.
38. Chances of success as a student attending a postsecondary area

vocational school in plant and soil science.

39. Chances of success as a student attending a postsecondary area vocational school in agricultural mechanics.

40. Chances of success as a student attending a postsecondary area vocational school in agricultural management.

Hypothesis 2. There will be significant differences in Animal Science Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

Hypothesis 3. There will be significant differences in Plant and Soil Science Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

Hypothesis 4. There will be significant differences in Agricultural Mechanics Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

Hypothesis 5. There will be significant differences in Agricultural Management Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

REVIEW OF LITERATURE AND RELATED RESEARCH

Introduction

Considerable research efforts have been expended on the study of students' career development and the factors believed to influence it. However, the search of the literature revealed very little conclusive

information with regard to differences which may exist in factors related to the educational plans among high school vocational agriculture students who plan to attend a postsecondary area vocational school, a four-year college or university, or enter the world of work upon graduation from high school.

The general plan to this review observes the following topical sequence:

A. Educational and Occupational Guidance in Process of Career Development.

B. Educational and Occupational Aspirations.

Educational and Occupational Guidance in Process of Career Development

Assisting youth in the process of establishing educational and occupational goals has been a major concern to educators for a number of years. However, the rapid expansion of postsecondary institutions has brought about an increased awareness of the need for career guidance.

Sidney P. Marland, former U.S. Commissioner of Education, has emphasized the need to "reshape our system of education to meet the career demands of the astonishingly complex technological society we live in" (23). Others who have been especially concerned with the role of education in the career development process include Venn (40), Havighurst (16), Thomas (38), Evans (12), and the U.S. Panel of Consultants on Vocational Education (39).

Grant and Demos (15) reported that in spite of the many fine contributions of secondary school counselors, high schools continue to graduate many individuals who have not made educational and vocational plans, or who have made such unrealistic ones that they emerge into the world of work for which they are unprepared and in which industry closes its doors to them.

In years past, the dispensing of career information and assisting youth in their educational and occupational plans has been primarily the responsibility

of vocational guidance counselors. The 1968 Vocational Education Amendments (41) expanded the concept of vocational guidance and counseling to include educational and occupational orientation through group instruction as well as through individual counseling (42). The provisions for the act authorize funds for projects designed to provide both elementary and secondary school students with occupational information and the educational requirements for the various occupations in the world of work.

The teacher of vocational agriculture, by his training and experience, is probably more familiar with the complex array of educational and occupational opportunities in agriculture than any other member of the school staff. As pointed out by Broyles (1), the teacher of vocational agriculture must assume responsibility as a member of the vocational guidance team if interested students are to find their place in the agricultural world of work. He concluded that if this responsibility is not accepted, then the entire industry of agriculture will suffer.

It was reported by Phipps (27) that guidance is an essential part of education, and that "vocational guidance, an important aspect of vocational agriculture, is the process of assisting an individual to choose an occupatio prepare for it, adjust to it, and progress in it" (p. 571).

Byram (4) emphasized the importance of vocational guidance in the following statement:

> Counseling must help youth to prepare for and make a series of choices with respect to occupations at different stages, to education plans, to their competencies and aptitudes, and to vocational aspirations (p. 219).

He concluded that educational and occupational choices are related to students interests and that no student can become interested in an occupatio about which he knows nothing. He suggested that the teacher and the counsel may broaden the spectrum of student interests by motivating students to

consider occupations which they have not previously considered.

Supplying students with educational and occupational information about agriculture is an important function of the high school vocational agriculture program today and must play a greater role in the future because of (a) the great advances in the agricultural industry, (b) new objectives for vocational education in agriculture, (c) changes in rural high schools due to consolidation, and (d) increased opportunities for postsecondary education.

Byram (3) stated that "a principle well accepted by leaders in vocational education and guidance is that an effective program of vocational education must be preceded, accompanied, and followed by educational and vocational guidance" (p. 17).

White (43) emphasized the need for guidance in career development to meet demanding needs of agriculture in the future, and the need for wider and more thorough dissemination of educational and occupational information.

Educational and Occupational Aspirations

A number of studies have been conducted to determine the educational and occupational aspirations of youth. Studies have also been conducted to determine factors influencing these educational and vocational plans.

Slocum and Garrett (33) conducted a study of the educational and occupational aspirations of rural youth in the state of Washington. From this study it was concluded that of those students who had made tentative decisions to attend college, the majority indicated they planned to enter Washington Community Colleges. Students in the sample were asked what type of vocational training they would like to receive at their respective schools. "Shop," a type of industrial arts, was noted as a favorite subject among male students in general. Business, both secretarial and other aspects, was a major concern for noncollege and college oriented female students.

Agriculture attracted a relatively low 11.3 percent. For those who did not plan to attend college, two types of reasons were frequently given as explanations; matters pertaining to their high school scholastic situation and those related to finances. The economic prospects associated with certain occupations also constituted a central reason for preference. Other prominent reasons were interesting work, a sustained interest in this type of occupation since childhood, and the number of perceived opportunities in this field. In general, both boys and girls felt that they had made their respective choices because of increased opportunities in that vocation, rather than as a consequence of parents, counselor, teacher, or peer group influence.

Lungstrum (22) conducted a study regarding high school students' choice of posthigh school institutions. It was found that for all the 285 respondents, 52.3 percent planned to attend a four-year college or university, 23.9 percent planned to attend a public area vocational-technical school and the remaining 23.8 percent were almost evenly decided between public junior colleges and nonpublic business and technical schools as their choice of a posthigh school institution. The proportion of students who indicated that they had plans for continuing their education was constantly larger with each higher level of their father's occupation. The major proportion of students who responded that they were not sure if they would continue their education, came from families whose fathers were employed at the skilled level or below. The proportion of students who did not plan to receive further education was 25 percent for those students whose fathers were employed at the unskilled and semi-skilled levels. A total of 27.5 percent of those students whose fathers were employed at the skilled level did not plan to receive further education. Slightly fewer than 19 percent of the students of semi-professional families had no plans for further

education.

In a study of the educational plans of Montana high school seniors (11), the results indicated that students from communities under 40,000 in size were less likely to continue their formal education beyond the high school level. The percentage given indicates that children from lower income families are considerably less likely to continue their education beyond high school. Grades appeared to be a determining factor regarding plans for further education. Seventy-seven percent of those seeking higher education were planning to attend a four-year institution, and 23 percent were planning to attend vocational-technical schools, or business or trade schools.

Quesada and Seaver (29) in their studies on education, employment, and income of high school vocational agriculture graduates in Connecticut, stated that the classes of 1967 and 1970 revealed a marked increase in the proportion of students with major interests in the field of forestry and natural resources, plant science, landscaping and ornamental horticulture. There was also increased interests in the livestock industry which may have been a result of the increase in the number of pleasure horses. Approximately 45 percent of the vocational agriculture graduates continued their formal education for one or two years beyond high school. However, approximately 10 percent of the vocational agriculture graduates continued their education at a four-year college or university.

Perhaps the most interesting findings of the study of educational aspirations and expectations of students in rural Washington high schools (10) are that more farm boys than non-farm boys in the sample had higher educational aspirations and expectations, and farm and non-farm girls differed very little in educational aspirations and expectations. Students who indicated that all or most of their friends were from farms were more likely

to have higher educational aspirations and expectations than other students.

Byler (2) conducted a study to determine the educational and occupational plans of junior and senior vocational agriculture students in Illinois. It was reported that approximately 23 percent of the students surveyed planned to enter on-farm agricultural occupations, about 20 percent planned to enter off-farm agricultural occupations and 57.6 percent planned to enter non-agricultural occupations upon completion of their formal education. It was also reported that students who had selected off-farm agricultural occupations planned to engage in more posthigh school education than students planning to enter on-farm agricultural occupations and students planning to enter non-agricultural occupations.

In a report of students' vocational interest surveys in Ohio schools, Winefordner (44) concluded that 37.5 percent indicated plans for additional training after high school other than college; 26.7 percent indicated interest in vocational training and had no plans to attend college; 18.9 percent indicated they planned to attend college and had no desire for vocational training.

Shill (31) conducted a study of the educational aspirations, expectations and abilities of rural male high school seniors in Mississippi. This study indicated that over three times as many students in the vocational agriculture groups as in the non-vocational agriculture group, aspired to three years or less formal training beyond high school. It was also reported that over six times as many vocational agriculture students reported no aspiration for continuing any type of formal education beyond high school. Specific data revealed in this study tends to indicate that the predominant influence in most individual aspiration and expectations level is the immediate family. Some families tended to produce positive influence on the educational aspiration and expectation level.

In a study of the future plans of Oregon high school seniors in 1972, Linicum (20) concluded that the majority (70 percent) of Oregon high school students plan to continue their education at the postsecondary level. The future educational plans of these seniors were closely related to the educational background of their parents. The vast majority of Oregon's high school seniors who planned to continue their education at the postsecondary level intended to enroll in Oregon institutions. Approximately equal numbers of the Oregon high school seniors planned to enroll in vocational-technical and academic programs at the postsecondary level.

A survey of the educational and vocational interests and plans of Indiana's high school graduates in 1966 (30), revealed that about three-fourths of these students recognized the need for additional educational or vocational training beyond high school, and had planned accordingly. About 8,330 seniors indicated they planned to enroll in a technical school.

Soper (34) reported that the average grade of students who showed an interest for attending a trade or vocational school is significantly lower than those of students who planned to receive a bachelor's degree or more. The reported educational level achieved by parents of students who indicated an intention to pursue some form of vocational education following high school was significantly lower than the reported educational level of parents of students who indicated plans for attending a four-year institution. In a posthigh school career preference study (28), the results indicated that vocational-technical education is listed by more students than any other type of postsecondary education plans in southwestern Wisconsin. Over 600 of the students (27 percent) expressed interest in vocational-technical education in that district compared to only 7 percent in the national population surveyed. The dramatic contrast is vivid evidence of community support for vocational education and illustrates the remarkable level of development for

vocational education in Wisconsin.

In the current population report on the posthigh school plans of seniors (7), two-thirds of the 880,000 students who reported that they may attend college in the future, indicated an interest in both two-year and four-year colleges. Although 862,000 students (26 percent) of all high school seniors did not plan to attend college or university, a large proportion of this group did plan to attend technical or trade schools. Forty-five percent of the students who did not plan to attend college indicated that they planned to enter a business or vocational school.

Hudson and Rives (18) in their studies of the educational and occupational plans of Delaware high school seniors concluded that four out of five respondents planned to continue their formal education beyond high school. Those planning to attend college immediately following graduation from high school accounted for more than half of all respondents. This represents a slight increase over the figures reported in the 1966 study of the posthigh school seniors. Two out of three respondents planning to attend college expected to pursue their chosen program of study at the baccalaureate level.

Mondart et al. (24) in their studies on the educational and occupational aspirations and expectations of high school youth indicated that approximately one-third of the boys and girls aspired to a college degree. About the same percentage of both male and female indicated a desire for some posthigh school training not leading to a college degree. About one-third of the students in this study were either uncertain as to their educational aspirations, or they considered high school to be terminal. The results of the study indicated a tremendous impact of the home upon the plans of the youth. Both girls and boys ranked their mothers first and fathers second as the most influence upon their educational plans. A friend is placed in third position, with another member of the family in fourth place. A number

of persons in school are identified as exerting influence. Foremost among them in order named are the counselor, the principal, and the academic teacher.

In the current population reports (8) on the college plans of high school seniors, 42 percent of the high school seniors expressed that they had definite plans to enter college, and another 28 percent expressed somewhat less definite plans. About 7 percent planned to enter a two-year college, and 25 percent had definite plans to enter a four-year college. Only 5 percent of all high school seniors expressed definite plans to enter a vocational-technical or trade school following high school graduation, however, an additional 5 percent indicated they may attend that type of school.

Sperry et al. (35) in their studies on the educational and vocational goals of rural youth in the South found that non-farm youth placed a higher value on an education than farm youth.

Lingreen (19) reported that 71 percent of the seniors studied indicated plans to enroll in a college academic program while 15 percent indicated plans to enroll in a vocational-technical program at some college or university in Idaho. Little et al. (21) in their studies on the exploration into the college plans and experiences of high school graduates observed that of the 45 percent who planned to continue their education, two-thirds were planning to attend a degree-granting institution. The educational level of the parents had influenced the plans of the children at all levels of mental ability and scholastic achievement of the children. The number of graduates who were continuing their education beyond high school increased with each increase in high school size. These facts indicate that size of the school as an influence upon the decisions of graduates to go to college is not the direct result of size itself. Rather the characteristics of the graduates

and of their parents as individuals are important.

Siemens and Jackson (32), in their studies of educational plans and their fulfillment indicated that of the 640 senior students studied, 40 percent received some training beyond high school. Of those who planned to receive business or vocational-technical training, 35 percent enrolled for posthigh school training. The higher the average high school grade, the greater the probability that posthigh school plans would be fulfilled.

Fetters (14) reported in his findings that about 31 percent of all students with college intentions, planned to attend two-year colleges. Sixty-five percent planned to attend four-year colleges or universities and 4 percent were still undecided between the two types of institutions. The overwhelming majority of students considered themselves as having a great deal of influence on their posthigh school plans.

In the postsecondary education access studies performed by Hochschild (17) in Vermont, it was concluded that the demand for university services and two-year college services is very high, and the preference for four-year college seems relatively low. The demand for trade schools and related apprenticeships are relatively substantial. Slocum et al. (33) concluded that the relatively high number of students who said they expected to attend a junior college indicates that the community college system is very important in the state of Washington.

Carpenter and Rogers (6) in Review and Synthesis of Research in Agricultural Education, reported that researchers are showing renewed interest in student clientele for programs of vocational agriculture.

> Most of this interest has centered upon high school students with concern for a better understanding of them and the processes they undergo in deciding about future educational and career goals (p. 39).

EXECUTION OF STUDY

The primary objective of this research study was to determine if there are differences in selected factors related to the educational plans among vocational agriculture students who planned to attend a postsecondary area vocational school; vocational agriculture students who planned to attend a four-year college or university; and vocational agriculture students who planned to enter the world of work and not attend college.

Design

The design for this research study was basically an ex post facto design as described by Campbell and Stanley (5).

Population

The population for this study consisted of all junior and senior students enrolled in secondary vocational agriculture programs in Iowa. According to the Summary of Educational Activities in Agriculture/ Agribusiness Provided by Local School Districts (37) there were a total of 231 high school vocational agriculture departments with an enrollment of 15,589 during the 1973-74 school year.

Sample

A sample of thirty public schools from all of the high schools in Iowa which provided vocational agriculture programs in 1974-75 were selected to participate in the research study.

In completing the instruments, each student was expected to state his or her educational plans upon graduation from high school. Based upon the student's educational plans, the following groups were identified and studied:

Group 1 - Vocational agriculture students who planned to attend a postsecondary area vocational school upon graduation from high school.

Group 2 - Vocational agriculture students who planned to attend a four-year college or university upon graduation from high school.

Group 3 - Vocational agriculture students who planned to enter the world of work upon graduation from high school.

Instrumentation

The instruments used in collecting the data for this study are as follows:

A. Personal, Family, and Community Data Related to Educational and Occupational Plans of Iowa Vocational Agriculture Students (see Appendix A). This instrument was developed to assess the personal, family and community variables related to the educational plans of high school vocational agriculture students. The variables which this instrument is designed to assess are as follows:

1. High school class.
2. Semesters of vocational agriculture completed.
3. Grades received in vocational agriculture.
4. Grades received in all courses.
5. Participation in high school activities.
6. Place of residence.
7. Occupational plans.
8. Years of posthigh school education planned.
9. Work experience while in high school.

10. "Significant others" influencing occupational choice.
11. Amount of certainty regarding occupational choice.
12. Amount of thought given to occupational choice.
13. Ability for occupation planning to enter.
14. Amount of work experience in occupation planning to enter.
15. Knowledge of occupation planning to enter.
16. Value of high school training for occupation planning to enter.
17. Amount of training high school has provided for occupation planning to enter.
18. Amount of encouragement to continue education received from father.
19. Amount of encouragement to continue education received from mother.
20. Amount of encouragement received from father to attend an area vocational school.
21. Amount of encouragement received from father to attend a four-year college or university.
22. Amount of encouragement received from mother to attend a postsecondary area vocational school.
23. Amount of encouragement received from mother to attend a four-year college or university.
24. Amount of encouragement received from vo-ag instructor to attend a postsecondary area vocational school.
25. Amount of encouragement received from vo-ag instructor to attend a four-year college or university.
26. Value of high school vo-ag courses completed in preparing for occupation planning to enter.

27. Value of FFA program in preparing for occupation planning to enter.
28. Value of vo-ag courses completed in preparing to attend a postsecondary area vocational school.
29. Value of vo-ag courses completed in preparing to attend a four-year college or university.
30. Value of high school courses in preparing to attend a post-secondary area vocational school.
31. Value of high school courses in preparing to attend a four-year college or university.
32. Value of supervised occupational experience program in preparing for occupation planning to enter.
33. Chances of success as student attending a four-year college or university in animal science.
34. Chances of success as student attending a four-year college or university in plant and soil science.
35. Chances of success as student attending a four-year college or university in agricultural mechanics.
36. Chances of success as a student attending a four-year college or university in agricultural management.
37. Chances of success as a student attending a postsecondary area vocational school in animal science.
38. Chances of success as a student attending a postsecondary area vocational school in plant and soil science.
39. Chances of success as a student attending a postsecondary area vocational school in agricultural mechanics.
40. Chances of success as a student attending a postsecondary area vocational school in agricultural management.

B. Agribusiness Achievement Test. This instrument developed by Peterson, et al. (26) was selected to assess vocational agriculture students' achievement in the following areas of agriculture:

1. Animal Science.
2. Plant and Soil Science.
3. Management.
4. Mechanics.

Research Procedures

A sample of thirty public schools from all of the high schools in Iowa which provided vocational agriculture programs in 1974-75 were selected to participate in this research study. Using the 1974-75 list of vocational agriculture departments (9) these schools were listed according to the area vocational school district in which they were located. Using a table of random numbers, two high schools were selected at random from each of the fifteen area school districts to comprise the sample of thirty schools selected to participate in the research.

Upon selection of the sample, the vocational agriculture instructor of each school was informed of the study by letter (see Appendix B) to seek agreement for his vocational agriculture department to participate in the study. Alternative schools were selected to replace those who would not agree to participate in the study. Only two schools from the original sample of thirty schools did not agree to participate.

Upon receiving approval from thirty schools, (see Appendix C) the research project staff contacted the vocational agriculture instructors of these schools to provide detailed instructions for administering the questionnaire and Agribusiness Achievement Test (see Appendix D).

Each vocational agriculture department participating in the study was mailed a sufficient number of questionnaires and answer sheets for all of the junior and senior students who were currently enrolled in his vocational agriculture classes. The vocational agriculture instructors were asked to administer these instruments during the regular class time to all junior and senior vocational agriculture students between the dates of December 9, 1974 to January 17, 1975. Because of differing lengths and time of class periods among the schools, no attempts were made to coordinate any more than the order of instrument administration.

It was also requested that the instruments be administed on five different days. The first being the questionnaire, followed by the four parts of the Achievement Test in the following order:

1. Animal Science.
2. Plant and Soil Science.
3. Mechanics
4. Management.

Each of the parts of the Achievement Test took approximately fifty minutes, forty minutes for actual testing.

Each instructor was provided a complete set of standardized directions for the administration of the Agribusiness Achievement Test. To further assist in administering the instruments, the following check list of data collection was provided each instructor:

Check List of Data Collection:

_____(1) Administer the instruments, both the questionnaire and the achievement test to your high school junior and senior vocational agriculture students sometime between December 9 and January 17.

_____(2) Administer questionnaire - will take approximately 30 minutes.

_____(3) Have each student complete the Name Block, Grade, Sex, Birth date and School information on his answer sheet. Specific directions for this are given in "The Pre-Test Session" part of the Test Administration directions.

_____(4) Administer the Achievement Test - probably four different days would work best.

a) Animal Science Test - allow approximately fifty minutes

b) Plant and Soil Science Test - allow approximately fifty minutes.

c) Mechanics Test - allow approximately fifty minutes.

d) Management Test - allow approximately fifty minutes.

_____(5) Return test booklets, answer sheets and completed questionnaires to the Agricultural Education Department, Iowa State University.

_____(6) Review test results with your students - sometime in February.

After all of the instruments were completed by all junior and senior students in vocational agriculture, the test booklets, answer sheets and completed questionnaires were returned to the Department of Agricultural Education, Iowa State University research project staff to begin scoring and analyzing the data.

In completing the questionnaire, each student was requested to indicate his plans for completing formal education beyond high school (Item number nine of the Personal, Family and Community Data Instrument). A student's plans for completing formal education beyond high school became the criteria for which the following groups were identified and studied:

Group 1 - Vocational agriculture students who planned to attend a post-secondary area vocational school upon graduation from high school.

Group 2 - Vocational agriculture students who planned to attend a four-year college or university upon graduation from high school.

Group 3 - Vocational agriculture students who planned to enter the world of work upon graduation from high school.

Analysis of Data

Data from the instruments were tabulated, scored and transferred to IBM cards. The Agribusiness Achievement Test were hand scored by the research project staff using scoring keys provided by the publisher of the tests. The raw scores of each test were transformed to standard scores for analysis.

The data from these instruments were analyzed utilizing computer facilities at the Computation Center, Iowa State University, Ames, Iowa. The computer programs used in the statistical treatment were designed and prepared by the statistical consultants and the project research assistant. The following programs were utilized:

1. SPSS Correlation and Regression Programs.
2. Helarctos II Regression Program.

PRESENTATION AND ANALYSES OF DATA

The analyses of the data presented are arranged in a manner which brings attention to the objectives and hypotheses formulated for this research study. The analyses of the data are presented under the following headings:

1. Educational plans of junior and senior vocational agriculture students.
2. Personal, family and community variables related to the educational plans of vocational agriculture students.

3. Agribusiness Achievement Test scores.

4. Relationship of personal, family and community variables to Agribusiness Achievement Test scores.

The statistical analyses of the data consisted of the use of the following statistics: chi-square distribution, analysis of variance using the F ratio, and coefficient of correlation. All hypotheses were tested at the .05 level of probability.

Educational Objectives of Junior and Senior Vocational Agriculture Students

Part I of Questionnaire

One of the primary objectives of this research study was to determine the educational plans of junior and senior vocational agriculture students participating in the study. Item number nine of the questionnaire (Appendix A) requested students to complete the following statement:

Upon completion of high school, I plan to. . .

1. ( ) attend a postsecondary area vocational school or community college. Name of area vocational school or community college planning to attend _____.
2. ( ) attend a four-year college or university. Name of college or university planning to attend _____.
3. ( ) get a full-time job or work for myself and not attend college.

The number of junior and senior vocational agriculture students and percentage of combined grade levels grouped by educational plans are presented in Table 1.

Table 1. Number of junior and senior students and percentage of combined grade levels grouped by educational plans

Group number	Student group	Grade level		Total	Percent
		Junior	Senior		
1	Students who planned to attend a postsecondary area vocational school.	92	75	167	26.8
2	Students who planned to attend a four-year college or university.	62	46	108	17.3
3	Students who planned to enter the world of work.	204	144	348	55.9
	Total	358	265	623	100.0

Approximately 27 percent of the junior and senior vocational agriculture students participating in this study indicated that they planned to attend a postsecondary area vocational school upon graduation from high school. About 17 percent of these junior and senior vocational agriculture students planned to attend a four-year college or university. Over one-half (55.9 percent) of these students sampled indicated that they planned to get a full-time job or work for themselves and not attend college upon graduation from high school.

Personal, Family and Community Variables Related to the Educational Plans of Vocational Agriculture Students

Research hypothesis 1 stated that there will be significant differences in selected personal, family and community variables related to educational decision-making among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

The data utilized in testing this hypothesis were collected using the questionnaire which appears in Appendix A. A total of 40 variables were assessed from the data provided by this questionnaire. Four variables were analyzed using chi-square and 36 variables were analyzed using analysis of variance with the F ratio.

Grade level

The students selected to participate in this study were junior and senior vocational agriculture students from the thirty participating schools.

Item number two of the questionnaire requested that participating students indicate their grade level in high school. The frequency and percentage of responses to this variable for each of the student groups identified are presented in Table 2.

Table 2. Chi-square test for relationship between students' grade level and students' educational plans

Grade level	Frequency of responses by groups[a]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
Junior	92	55.1	62	57.4	204	58.6	358	57.5
Senior	75	44.9	46	42.6	144	41.4	265	42.5
Totals	167	100.0	108	100.0	348	100.0	623	100.0
	Chi-square		.57	ns				

[a]Group 1 = Students who planned to attend a postsecondary area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

The data collected for this variable were analyzed using the chi-square statistic to determine if there is a significant relationship between student's grade level and student's educational plans upon graduation from high school. The chi-square value of .57 is not significant at the .05 level of probability.

Semesters of vocational agriculture completed

Students were requested to indicate the number of semesters of vocational agriculture they had completed including the current semester. The data collected from this item of the questionnaire were analyzed using a three-way analysis of variance. A summary of the analysis of variance appears in Table 3. The sources of variation that were analyzed were schools, grade level (junior or senior) and educational plans upon graduation from high school. Because of incomplete questionnaires returned, it was necessary to delete two schools from all variables where analysis of variance was utilized to analyze the data.

The analysis of variance for students' responses to this item grouped according to their educational plans resulted in an F ratio of 1.79 which is not significant at the .05 level of probability. A significant ($P<.01$) F ratio was observed for grade level and for schools.

The means and standard deviations for semesters of vocational agriculture completed by students grouped according to their educational plans are presented in Table 4. From the data presented in this table, it may be concluded that no significant differences existed in the number of semesters of vocational agriculture completed by students grouped according to their educational plans upon graduation from high school.

Table 3. Analysis of variance summary table for number of semesters of vocational agriculture completed, among students who planned to attend a postsecondary area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	245.61	9.10	5.35**
Student grade level	1	338.61		199.22**
Student group	2	6.08	3.04	1.79
Student group x student grade level	2	3.58	1.79	1.05
Within	558	948.43	1.70	

**Significant at the .01 level of probability.

Table 4. Means and standard deviations for semesters of vocational agriculture completed by students grouped according to their educational plans

Group number	Student group	Number	Mean semesters	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	5.57	1.53
2	Students who planned to attend a four-year college or university.	104	5.43	1.84
3	Students who planned to enter the world of work.	329	5.35	1.72
	Total	591		

Grades received in vocational agriculture

Item number four of the questionnaire asked for students to indicate the types of grades they normally receive in vocational agriculture. Results of the three-way analysis of variance used to analyze responses to this variable are revealed in Table 5. The sources of variation that were analyzed are schools, grade level (junior and senior) and student group (grouped by educational plans).

An F ratio of 47.41 was observed for students' responses to this variable, grouped according to their educational plans. This F ratio is significant at the .01 level of probability with 2 and 558 degrees of freedom. A significant ($P<.01$) F ratio for this variable was also observed for the grade level of students.

Table 5. Analysis of variance summary table for grades received in vocational agriculture, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	178.72	7.36	3.04**
Student grade level	1	17.37		7.18**
Student group	2	229.51	114.76	47.41**
Student group x student grade level	2	9.46	4.73	1.95
Within	558	1350.51	2.42	

** Significant at the .01 level of probability.

A summary of the mean responses to this item by students grouped according to their educational plans is presented in Table 6.

Table 6. Mean responses for types of grades normally received in vocational agriculture by students grouped according to their educational plans

Group number	Student group	Number	Mean response	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	4.36	1.63
2	Students who planned to attend a four-year college or university.	104	3.09	1.60
3[b]	Students who planned to enter the world of work.	329	4.94	1.65
	Total	591		

[a]Mean response for Group 1 is significantly ($P<.01$) greater than the mean response for Group 2.

[b]Mean response for Group 3 is significantly ($P<.01$) greater than the mean responses for Groups 1 and 2.

Since a significant difference was observed among the means for the three student groups, it was necessary to compare each group mean with every other group mean to determine which of these group means were significantly different. This multiple comparison for each pair of means was accomplished using the Scheffe' method as described by Ferguson in Statistical Analysis in Psychology and Education (13). According to Ferguson the Scheffe' method for multiple comparison is more rigorous than other multiple comparison methods and will lead to fewer significant differences. Because of this, Scheffe' recommends that the investigator employ a less rigorous significance level. Thus, the .10 level may be used rather than the .05 level when making

multiple comparisons.

The Scheffé method of multiple comparison revealed that a mean response of 4.36 for Group 1 is significantly ($P < .01$) greater than the mean response of 3.09 for Group 2. From this, it may be concluded that students planning to attend a four-year college or university received higher grades in vocational agriculture than students planning to attend a postsecondary area vocational school upon graduation from high school. A mean response of 4.94 for Group 3 is significantly ($P < .01$) greater than the mean responses of 4.36 and 3.09 for Groups 1 and 2 respectively. It may therefore be concluded that students who planned to get a full-time job or become self-employed and not attend college received lower grades in vocational agriculture than those students planning to receive additional formal education beyond high school.

The frequencies and percentages for each response alternative to this item of the questionnaire for students grouped according to their educational plans are revealed in Table 7.

Grades received in all courses

In responding to this variable, students were requested to indicate the types of grades they normally get in all courses they have taken. A three-way analysis of variance was used to analyze the data for this variable. A summary of the analysis of variance calculation is presented in Table 8. The sources of variation that were analyzed are; schools, student grade level (junior or senior) and student group (grouped by their educational plans).

An F ratio of 3.42 was observed among schools, and with 2 and 27 degrees of freedom is significant at the .01 level of probability. An analysis of the mean responses to this variable by students grouped according to their educational plans revealed an F ratio of 64.63. This F ratio with

Table 7. Frequencies and percentages for response alternatives to grades normally received in vocational agriculture by students grouped according to their educational plans

Response alternative	Student group[a]			Total	Percent
	Group 1	Group 2	Group 3		
1. All A's.	3	19	6	38	4.5
2. Mostly A's but few B's.	19	26	18	63	10.2
3. Half A's and B's.	41	24	53	118	19.1
4. About equal A's, B's and C's.	17	14	36	67	10.8
5. Mostly B's and C's.	39	16	98	153	24.7
6. Mostly C's but few B's.	35	5	70	110	17.8
7. C's and D's.	12	4	56	72	11.6
8. D's and F's.	0	0	8	8	1.3
Total	166	108	345	619	100.0

[a]Group 1 = Students who planned to attend an area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

2 and 558 degrees of freedom is significant at the .01 level of probability.

A summary of the mean responses to this item by students grouped according to their educational plans appears in Table 9. Due to the significant F ratio that was observed among the means for the three student groups it was necessary to compare each pair of means to determine which means were significantly different.

Using the Scheffé method of multiple comparison it was found that the mean response of 4.99 for Group 1 is significantly ($P<.01$) greater than the mean response of 3.74 for Group 3. It may be concluded from this analysis

Table 8. Analysis of variance summary table for grades in all courses, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	162.91	6.03	3.42**
Student grade level	1	1.49	1.50	<1
Student group	2	228.36	114.18	64.63**
Student group x student grade level	2	.70	.35	<1
Within	558	985.79	1.77	

**Significant at the .01 level of probability.

Table 9. Mean responses for types of grades normally received in all courses by students grouped according to their educational plans

Group number	Student group	Number	Mean response	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	4.99	1.45
2	Students who planned to attend a four-year college or university.	104	3.74	1.40
3	Students who planned to enter the world of work.	329	5.56	1.37
	Total	591		

[a]Mean response for Group 1 is significantly ($P<.01$) greater than the mean response for Group 2.

[b]Mean response for Group 3 is significantly ($P<.01$) greater than the mean response for Groups 1 and 2.

that students who planned to attend a four-year college or university received higher grades in all their courses than did students who planned to attend an area vocational school upon graduation from high school.

The mean response of 5.56 for Group 3 is significantly ($P<.01$) greater than the mean responses of 4.99 and 3.74 for Groups 1 and 2 respectively. From this, it may be concluded that students who planned to complete formal education beyond high school normally received higher grades in all their courses than students who planned to enter the world of work upon graduation from high school.

The frequencies and percentages for each response alternative to this variable for students grouped according to their educational plans appear in Table 10.

Table 10. Frequencies and percentages for response alternatives to grades normally received in all courses by students grouped according to their educational plans

Response alternative	Student group[a]			Total	Percent
	Group 1	Group 2	Group 3		
1. All A's.	5	3	2	10	1.6
2. Mostly A's but few B's.	2	18	3	23	3.7
3. Half A's and B's.	22	27	19	68	11.0
4. About equal A's, B's and C's.	32	30	39	101	16.3
5. Mostly B's and C's.	40	15	91	146	23.5
6. Mostly C's but few B's.	44	12	92	148	23.8
7. C's and D's.	21	3	92	116	18.7
8. D's and F's.	1	0	8	9	1.4
Total	167	108	346	621	100.0

[a]Group 1 = Students who planned to attend an area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

Participation in high school activities

Students were requested to indicate the kinds of activities in which they have participated while in high school. The frequency and percentage of responses are summarized in Table 11.

The data received from this variable were analyzed using the chi-square statistic to determine the relationship among kinds of activities for which students had participated, and students' educational plans. A significant ($P<.001$) chi-square value of 30.80 was observed for the relationship between

Table 11. Chi-square test for relationship among kinds of activities students participated in and students' educational plans

Kinds of activities	Number students participating by groups[a]								
	Group 1		Group 2		Group 3		Totals		
	No.	%	No.	%	No.	%	No.	%	Chi-square
Annual	8	4.8	9	8.3	11	3.2	28	4.5	5.18***
Athletics	82	49.1	78	72.2	145	41.7	305	49.0	30.80***
Band	23	13.8	34	31.5	31	8.9	88	14.1	34.65***
Chorus	26	15.6	26	24.1	27	7.8	79	12.7	21.53***
Debate	3	1.8	2	1.9	5	1.4	10	1.6	0.14
FFA	144	86.2	94	87.0	287	82.5	525	84.3	1.96
4-H	52	31.1	51	47.2	71	20.4	179	27.9	30.62***
Hobby	3	1.8	6	5.6	4	1.1	13	2.1	7.93*
Student government	7	4.2	19	17.6	13	3.7	39	6.3	28.63***
Other	27	16.2	29	26.9	48	13.8	104	16.7	10.15**

[a]Group 1 = Students who planned to attend a postsecondary area school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

*Significant at .05 level of probability.

**Significant at .01 level of probability.

***Significant at .001 level of probability.

students' participation in athletics and students' educational plans. Consequently, it may be concluded that there is a relationship between students' participation in high school athletics and students' educational plans upon graduation from high school. Over 72 percent of those students who planned to attend a four-year college or university indicated that they participated in high school athletics; whereas, approximately 49 percent of those who planned to attend a postsecondary area vocational school, and 41.7 percent of those who planned to enter the world of work indicated that they participated in athletics.

A significant ($P<.001$) chi-square value of 34.65 was calculated for the relationship between students' participation in band and students' educational plans. About 32 percent of the students in Group 2 indicated that they participated in band; however, only 13.8 and 8.9 percent of Groups 1 and 3 respectively, indicated that they participated in band.

A significant ($P<.001$) chi-square value of 21.53 was also observed for the relationship between students' participation in chorus and students' educational plans upon graduation from high school. A greater number (24.1 percent) of students in Group 2 indicated they participated in chorus in comparison to 15.6 percent for Group 1 and 718 percent for Group 3.

Students were requested to indicate their participation in the FFA. For this activity, a chi-square value of 1.96 is not significant. However, it should be pointed out that 84.3 percent of the students participating in this research study indicated that they were a member of the FFA.

A significant ($P<.001$) chi-square value of 30.62 was calculated for the relationship between students' participation in the 4-H Club and students' educational plans upon graduation from high school. A total of 47.2 percent of the students in Group 2 indicated that they participated in the 4-H Club. Whereas, 31.1 percent of Group 1 and 20.4 percent of Group 3

indicated their participation in the 4-H Club.

In regard to students' participation in hobby clubs and student government, significant chi-square values were observed. For these activities, students who planned to attend a four-year college or university indicated a greater frequency of participation. It may be concluded that a relationship does exist between students' participation in student government activities and students' educational plans upon graduation from high school.

Place of residence

Item number 7 of the questionnaire requested that students indicate their place of residence. A summary of the data collected for this variable is presented in Table 12. Over 81 percent of the students participating in this study indicated that they were living on a farm. Data collected for this variable were analyzed using the chi-square statistic. A chi-square value of 6.70 for this variable is not significant. Therefore, it may be concluded that no relationship exists between students' place of residence and students' educational plans upon graduation from high school.

Occupational plans

Students were requested to indicate the occupation they plan to enter upon completion of their formal education. The data from this variable were analyzed as a dependent variable and therefore was not included as an independent variable for this research report. A complete analysis of this variable as a dependent variable may be found in a separate, but related research report.[1]

---

[1]Byler, B.L. Analysis of Factors Related to the Occupational Plans of Iowa Vocational Agriculture Students. Ames, Iowa: Department of Agricultural Education, Iowa State University, 1975.

Table 12. Chi-square test for relationship between students' place of residence and students' educational plans

Place of residence	Frequency of responses by groups[a]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
1. On a farm	139	83.2	91	84.3	279	80.2	509	81.7
2. In the open country but not on a farm	6	3.6	2	1.9	20	5.7	28	4.5
3. In a village under 2,500	12	7.2	8	7.4	22	6.3	42	6.7
4. In a town of 2,500 - 10,000	7	4.2	7	6.5	23	6.6	37	5.9
5. In a city over 10,000	3	1.8	0	0.0	4	1.1	7	1.1
Totals	167	100.0	108	100.0	348	100.0	623	100.0

Chi-square = 6.70 ns

[a] Group 1 = Students who planned to attend a postsecondary area school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

Number of years of posthigh school education planned

In responding to this item of the questionnaire, students were asked to indicate the number of years of further education they plan to get beyond high school. A three-way analysis of variance was utilized in analyzing the data received for this variable (Table 13). The sources of variation analyzed are; schools, student grade level (junior or senior), and student group (grouped by their educational plans). A significant ($P<.01$) F ratio of 740.79 was observed for the mean responses of students grouped by their educational plans.

A summary of the mean responses and standard deviations for this variable for students grouped by their educational plans is presented in Table 14. Since a significant F ratio was observed among the means for the three student groups it was necessary to compare each pair of means to determine which means were significantly different.

The Scheffe' method of multiple comparison revealed that a mean response of 5.12 for Group 2 is significantly ($P<.01$) greater than mean responses of 2.68 and 1.15 for Groups 1 and 3 respectively. Therefore, it may be concluded that students who planned to attend a four-year college or university planned to receive a greater number of years of posthigh school education than students who planned to attend a postsecondary area vocational school upon graduation from high school. A mean response of 2.68 for Group 1 is significantly ($P<.01$) greater than the mean response of 1.15 for Group 3. This difference would be expected since students in Group 3 indicated they planned to get a full-time job or work for themselves upon graduation from high school.

Table 13. Analysis of variance summary table for amount of further education beyond high school planned by student; among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	27.62	1.02	1.38
Student grade level	1	.02	.02	<1
Student group	2	1102.89	531.44	740.79**
Student group x student grade level	2	2.88	1.44	1.93
Within	558	415.37	.74	

** Significant at the .01 level of probability.

Table 14. Means and standard deviations regarding number of years of further education planned by students, for students grouped by their educational plans

Group number	Student group	Number	Mean response	Standard deviation
1[a]	Students who planned to attend a postsecondary and vocational school.	158	2.68	.99
2[b]	Students who planned to attend a four-year college or university.	104	5.12	1.36
3	Students who planned to enter the world of work.	329	1.15	.60
	Total	591		

[a]Mean response for Group 1 is significantly ($P<.01$) greater than mean response for Group 3.

[b]Mean response for Group 2 is significantly ($P<.01$) greater than mean response for Groups 1 and 3.

Work experience while in high school

Students participating in this study were requested to indicate their extent of working outside their family and home or farm. A summary of responses to this variable is presented in Table 15. The majority (51.6 percent) of the students sampled indicated that they sometimes work outside their family and home or farm. Over 29 percent of the students in the three groups indicated that they had a fairly regular job outside their family and home or farm. Whereas, 19 percent of the students sampled indicated that they did not work outside the family and home or farm.

The chi-square statistic was applied to the data obtained for this variable to test the relationship between students' extent of working outside their family and home or farm, and students' educational plans.

Table 15. Chi-square test for relationship between students' responses regarding extent of working while in high school and students' educational plans

Response alternatives	Frequency of responses by groups[a]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
1. I have a fairly regular job outside my family and home or farm.	48	28.7	18	16.6	116	33.6	182	29.4
2. I sometimes work outside my family and home or farm.	82	49.1	64	59.3	174	50.5	320	51.6
3. I do not work outside my family and home or farm.	37	22.2	26	24.1	55	15.9	118	19.0
Totals	167	100.0	108	100.0	345	100.0	620	100.0
	Chi-square = 13.64**							

[a]Group 1 = Students who planned to attend a postsecondary area school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

**Significant at the .01 level of probability.

A significant (P<.01) chi-square value of 13.64 was observed for this variable. Therefore, it may be concluded that a relationship does exist between the extent of students' working outside the family and home or farm and students' educational plans.

"Significant others" influencing occupational choice

This item of the questionnaire requested that students indicate the person who had the most influence on their choice of occupation they planned to enter upon completion of their formal education (Table 16). The majority (47 percent) of students in all three groups indicated that their father had the most influence on their choice of occupation. A greater percentage (52.6 percent) of students who planned to get a job upon completion from high school indicated their father had the most influence on their choice of occupation. This is in comparison to 42.9 percent for Group 1 and 34.4 percent for Group 2.

The chi-square statistic was used to analyze the data received from this variable. A significant (P<.001) chi-square value of 44.69 would indicate that a relationship does exist between students' response to the person having the most influence on their choice of occupation, and their educational plans upon graduation from high school.

Part II of Questionnaire

Part II of the questionnaire contained 31 items to be rated by each student participating in the study (see Appendix A). The students were asked to rate each of the statements on a 10 point scale from low to high. They were instructed to read each statement and rate how they feel about that statement by circling one number from 0 to 10. A score of 0 is the lowest and a score of 10 is the highest. For interpretation of the data

Table 16. Chi-square test for relationship between "significant others" influencing students' occupational choice and students' educational plans

"Significant others"	Frequency of responses by groups[a]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
1. Father	66	42.9	33	34.4	171	52.6	270	47.0
2. Mother	5	3.2	4	4.2	7	2.2	16	2.8
3. Brother or sister	8	5.2	2	2.1	17	5.2	27	4.7
4. Another relative	7	4.5	4	4.2	16	4.9	27	4.7
5. Counselor	11	7.1	4	4.2	2	.6	17	3.0
6. Close friend	9	5.8	4	4.2	27	8.3	40	7.0
7. Agriculture instructor	3	1.9	5	5.2	6	1.8	14	2.4
8. Another teacher	5	3.2	4	4.2	1	.3	10	1.7
9. Other than above	40	26.0	36	37.5	78	24.0	154	26.8
Totals	154	100.0	96	100.0	325	100.0	575	100.0

Chi-square = 44.69***

[a]Group 1 = Students who planned to attend a postsecondary area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

***Significant at the .001 level of probability.

received from each statement the following may be used:

Rating scale

1 = low

3 = below average

5 = average

7 = above average

10 = highest rating

The mean ratings by each of the three student groups were calculated for each of the statements on the rating scale in Part II of the questionnaire. A three-way analysis of variance was used to determine if significant differences exist among the mean ratings of the three student groups for each statement. The sources of variation that were analyzed for each statement are as follows; schools, student grade level (junior or senior) and student group (grouped by their educational plans).

Amount of certainty regarding occupational choice

The first statement of the rating scale requested that students indicate how certain they are that they will enter the occupation they have chosen. This was done by circling a number of the rating scale from 0 to 10. Results of the analysis of variance used to analyze the mean response ratings for the three groups are presented in Table 17.

An F ratio of 4.33 was observed for students' ratings of this statement grouped by student grade level. A significant ($P<.05$) F ratio of 3.17 was also observed for students' responses to this statement, grouped according to their educational plans.

Table 18 summarizes the mean ratings and standard deviations for the three student groups. The Scheffé procedure for multiple comparison was used to determine which means are significantly different. Using this

Table 17. Analysis of variance summary table for amount of certainty regarding occupational choice, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	172.07	6.37	1.02
Student grade level	1	27.06	27.06	4.33*
Student group	2	39.78	19.83	3.17*
Student group x student grade level	2	5.09	2.55	< 1
Within	558	3489.17	6.25	

*Significant at the .05 level of probability.

method, it was determined that the mean response rating of 7.10 for Group 3 is significantly ($P<.05$) greater than the mean response rating of 6.35 for Group 2. No other significant differences were observed. It may be concluded from this analysis that students who planned to enter the world of work upon graduation from high school were more certain of their choice of occupation than students who planned to attend a four-year college or university. A mean rating of over 6.0 for each group would indicate that students in all three groups were relatively certain of their occupational choice.

Table 18. Means and standard deviations regarding amount of certainty for occupational choice, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	6.79	2.41
2	Students who planned to attend a four-year college or university.	104	6.35	2.60
3[a]	Students who planned to enter the world of work.	329	7.10	2.54
	Total	591		

[a]Mean rating for Group 3 is significantly ($P<.05$) greater than mean rating for Group 2.

Amount of thought given to occupational choice

This statement of the rating scale asked that students indicate the amount of thought they had given regarding their occupational choice. A summary of the analysis of variance appears in Table 19. The analysis of

Table 19. Analysis of variance summary table for amount of thought given to choice of occupation, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	97.94	3.63	<1
Student grade level	1	70.47	70.47	14.15**
Student group	2	9.84	4.92	<1
Student group x student grade level	2	1.19	.60	<1
Within	558	2778.65	4.98	

**Significant at the .01 level of probability.

variance for students' ratings of this statement grouped by grade level (junior or senior) revealed an F ratio of 14.15. This ratio when tested at the .01 level of probability with 1 and 558 degrees of freedom is significant. No significant differences were observed for students' ratings grouped by their educational plans.

Table 20 summarizes the mean ratings and standard deviations for the student groups. Considering a rating of 5.0 as the midpoint on the rating scale, a mean rating of over 7.0 for each student group would indicate that these students have given considerable amount of thought regarding their occupational choice.

Table 20. Means and standard deviations regarding amount of thought given to choice of occupation, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	7.85	1.95
2	Students who planned to attend a four-year college or university.	104	7.40	2.21
3	Students who planned to enter the world of work.	329	7.53	2.39
	Total	591		

Ability for occupation planning to enter

In responding to this statement, students were requested to indicate their perception of the ability they have for the occupation they plan to enter. Results of the analysis of variance used in analyzing the mean

ratings for this variable are presented in Table 21. There were no significant differences observed in mean ratings for students grouped by grade level or students grouped according to their educational plans.

The means and standard deviations for this variable appear in Table 22. A mean rating of over 7.0 for each student group would indicate that students feel rather competent in their ability for the occupation they are planning to enter.

Amount of work experience in occupation planning to enter

Students were requested to indicate their perception of the amount of work experience they had received for the occupation they planned to enter upon completion of their formal education. Table 23 summarizes the analysis of variance used in analyzing the data for this statement. A significant ($P<.01$) F ratio of 13.58 was observed for the mean ratings of students grouped according to their educational plans.

The means and standard deviations for this variable appear in Table 24. A multiple comparison for the mean ratings by the three student groups revealed that a mean rating of 6.77 for Group 1 is significantly ($P<.05$) greater than a mean rating of 5.79 for Group 2. A mean rating of 7.56 for Group 3 is significantly ($P<.05$) greater than a mean rating of 6.77 for Group 1 and a mean rating of 7.56 for Group 3 is significantly ($P<.01$) greater than a mean rating of 5.79 for Group 2. Therefore, it may be concluded that students who planned to enter the world of work upon graduation from high school indicated they had received a greater amount of work experience for the occupation they planned to enter than did students who planned to continue their formal education beyond high school. Also, it may be concluded that students who planned to attend a postsecondary area vocational school indicated that they had received a greater amount of work

Table 21. Analysis of variance summary table for student's perception of ability to perform selected occupation, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	109.98	4.07	1.11
Student grade level	1	8.93	8.93	2.42
Student group	2	1.42	.71	<1
Student group x student grade level	2	6.17	3.09	<1
Within	558	2055.93	3.68	

Table 22. Mean and standard deviations regarding students' perception of ability to perform selected occupation, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	7.68	1.85
2	Students who planned to attend a four-year college or university.	104	7.71	1.96
3	Students who planned to enter the world of work.	329	7.86	1.97
	Total	591		

experience for the occupation they are planning to enter than did students who planned to attend a four-year college or university.

Knowledge of occupation planning to enter

In responding to this variable, students were asked to indicate their perception of the knowledge they have for the occupation they are planning to enter upon completion of their formal education. The analysis of variance summary for this variable is revealed in Table 25. A significant ($P<.05$) F ratio of 3.19 was observed for the mean ratings of this variable for students grouped according to their educational plans. Also, a significant interaction was observed between student group and student grade level. This F ratio of 4.19 is significant at the .05 level of probability.

Table 26 summarizes the means and standard deviations received from this variable. A multiple comparison revealed no significant differences in the mean ratings of this statement for students grouped according to

Table 23. Analysis of variance summary table for amount of work experience in occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	341.75	12.66	1.44
Student grade level	1	.50	.50	< 1
Student group	2	238.55	119.27	13.58**
Student group x student grade level	2	30.71	15.36	1.75
Within	538	4901.13	8.78	

**Significant at the .01 level of probability.

Table 24. Means and standard deviations regarding amount of work experience in occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	6.77	2.89
2	Students who planned to attend a four-year college or university.	104	5.79	3.46
3[b]	Students who planned to enter the world of work.	329	7.56	2.89
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.05$) greater than mean rating for Group 2.

[b]Mean rating for Group 3 is significantly ($P<.05$) greater than mean rating for Group 1.

Mean rating for Group 3 is significantly ($P<.01$) greater than mean rating for Group 2.

their educational plans.

Value of high school training for occupation planning to enter

Students were requested to indicate their perception of the value of their high school training for the occupation they are planning to enter. A three-way analysis of variance for the mean ratings of this variable reveals a significant ($P<.01$) F ratio of 6.58 for students grouped according to their educational plans (Table 27).

The means and standard deviations for each student group are presented in Table 28. A multiple comparison of all group means using the Scheffe' method revealed that a mean rating of 6.07 for Group 2 is significantly

Table 25. Analysis of variance summary table for student's perception of knowledge of occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	178.92	6.63	1.39
Student grade level	1	1.45	1.45	<1
Student group	2	30.37	15.19	3.19*
Student group x student grade level	2	39.90	19.95	4.19*
Within	558	2654.93	4.76	

*Significant at the .05 level of probability.

Table 26. Means and standard deviations regarding students' perception of knowledge of occupation planning to enter, for students grouped by thier educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	6.94	2.18
2	Students who planned to attend a four-year college or university.	104	6.92	2.18
3	Students who planned to enter the world of work.	329	7.37	2.25
	Total	591		

($P<.01$) greater than a mean rating of 5.28 for Group 3. Therefore, it may be concluded that students who planned to attend a postsecondary area vocational school indicated a higher rating in regard to their perception of the value of their high school training for the occupation they are planning to enter than did students who planned to enter the world of work upon graduation from high school.

Amount of training high school has provided for occupation planning to enter

This item of the rating scale requested that students indicate their perception of the amount of training their high school has provided for the occupation they are planning to enter. A summary of the analysis of variance for the mean ratings of the three student groups is presented in Table 29. A significant ($P<.01$) F ratio of 3.00 was calculated for the variation in response to this variable among schools. This variance would indicate that

Table 27. Analysis of variance summary table for student's perception of value of high school training for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	541.85	20.07	3.00**
Student grade level	1	3.54	3.54	<1
Student group	2	87.93	43.97	6.58**
Student group x student grade level	2	14.29	7.15	1.07
Within	558	3729.08	6.68	

**Significant at the .01 level of probability.

Table 28. Means and standard deviations regarding students' perception of value of high school training for occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	5.76	2.65
2[a]	Students who planned to attend a four-year college or university.	104	6.07	2.67
3	Students who planned to enter the world of work.	329	5.28	2.73
	Total	591		

[a]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

there is a difference among schools participating in the study as to students' perceptions of the value of their high school training for the occupation they are planning to enter. A significant ($P<.05$) F ratio of 3.58 also observed for the mean ratings of this variable for students grouped according to their educational plans upon graduation from high school.

Table 30 summarizes the group means and standard deviations for this variable. Using the Scheffé method for multiple comparison, it was determined that the mean rating of 5.38 for Group 2 is significantly ($P<.05$) greater than the mean rating of 4.79 for Group 3. Consequently it may be concluded that students who planned to attend a postsecondary area vocational school perceived their high school as providing a greater amount of training for the occupation they are planning to enter than did students who planned

Table 29. Analysis of variance summary table for student's perception of amount of training high school has provided for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	568.80	21.07	3.00**
Student grade level	1	.01	.01	< 1
Student group	2	50.28	25.14	3.58*
Student group x student grade level	2	.61	.31	< 1
Within	558	3915.04	7.02	

**Significant at the .01 level of probability.

*Significant at the .05 level of probability.

Table 30. Means and standard deviations regarding students' perception of amount of training high school has provided for occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	5.03	2.57
2[a]	Students who planned to attend a four-year college or university.	104	5.38	2.83
3	Students who planned to enter the world of work.	329	4.79	2.83
	Total	591		

[a]Mean rating for Group 2 is significantly (P<.05) greater than mean rating for Group 3.

to get a full-time job or work for themselves upon graduation from high school. It should also be pointed out that this item of the rating scale received a 5 rating or less by each student group. A rating of 5 is mid-point of the scale and therefore could be considered as an average rating.

Amount of encouragement to continue education beyond high school student has received from father

Students were requested to indicate the amount of encouragement they had received from their father to continue their formal education beyond high school. A three-way analysis of variance was used in analyzing the data received from this statement on the rating scale (Table 31). An F ratio of 65.27 was observed for differences among the mean ratings indicated by the three student groups. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

Table 31. Analysis of variance summary table for amount of encouragement student had received from father to continue education beyond high school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	339.87	12.59	1.29
Student grade level	1	1.56	1.56	< 1
Student group	2	1276.53	638.26	65.27**
Student group x student grade level	2	2.57	1.29	< 1
Within	558	5456.60	9.78	

**Significant at the .01 level of probability.

The means and standard deviations for this variable for students grouped by their educational plans are revealed in Table 32. A multiple comparison of all group means indicated that a mean rating of 6.11 for Group 1 is significantly ($P<.01$) greater than the mean rating of 3.25 for Group 3. It was also revealed that a mean rating of 7.02 for Group 2 is significantly ($P<.01$) greater than the mean rating of 3.25 for Group 3. Therefore, it may be concluded that students who planned to obtain post-high school education had received more encouragement from their father to receive this additional formal education than did students who planned to enter the world of work upon graduation from high school. From this observation, it would appear that the father does have a definite influence upon their children's plans for attending college.

Table 32. Means and standard deviations regarding amount of encouragement student had received from father to continue education beyond high school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	6.11	3.15
2[b]	Students who planned to attend a four-year college or university.	104	7.02	3.16
3	Students who planned to enter the world of work.	329	3.25	3.13
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

Amount of encouragement to continue education beyond high school student has received from mother

For this variable, students were asked to report their perception of the amount of encouragement they had received from their mother to continue their education beyond high school. Table 33 summarizes the three-way analysis of variance used to analyze the data received from this variable. An F ratio of 86.89 for the mean ratings of students grouped according to their educational plans is significant at the .01 level of probability.

Table 34 reveals the mean ratings and standard deviations for this variable. As a procedure for multiple comparison of all group means, the Scheffe' was again utilized. Using this procedure it was found that a mean rating of 7.89 for Group 2 is significantly ($P<.10$) greater than a mean rating of 6.89 for Group 1. It was also revealed that a mean rating of 6.89 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.82 for Group 3. A mean rating of 7.89 for Group 2 is significantly ($P<.01$) greater than a mean rating of 3.82 for Group 3. From this analysis it may be concluded that students who planned to attend college received a greater amount of encouragement from their mother to do so than did students who did not plan to attend college. It may also be concluded that students who planned to attend a four-year college or university had received a greater amount of encouragement from their mother to continue their education beyond high school than did students who planned to attend a postsecondary area vocational school.

Amount of encouragement received from father to attend an area vocational school

This item of the rating scale requested that students indicate their perception of the amount of encouragement they had received from their father to attend a postsecondary area vocational school upon graduation

Table 33. Analysis of variance summary table for amount of encouragement student had received from mother to continue education beyond high school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	177.06	6.56	<1
Student grade level	1	3.87	3.87	<1
Student group	2	1596.22	798.11	86.89**
Student group x student grade level	2	7.66	3.83	<1
Within	558	5125.20	9.19	

**Significant at the .01 level of probability.

Table 34. Means and standard deviations regarding amount of encouragement student had received from mother to continue education beyond high school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	6.89	2.95
2[b]	Students who planned to attend a four-year college or university.	104	7.89	2.35
3	Students who planned to enter the world of work.	329	3.82	3.21
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.10$) greater than mean rating for Group 1.

Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

from high school. The three-way analysis of variance used to analyze the data for this data is presented in Table 35. An F ratio of 38.46 was observed for the mean ratings of students grouped by their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

The mean ratings and standard deviations for this variable are presented in Table 36. Since a significant F ratio was observed among the mean ratings for the three student groups, it was necessary to make a multiple comparison to determine which means were significantly different. This multiple comparison revealed that a mean response of 5.29 for Group 1

Table 35. Analysis of variance summary table for amount of encouragement student had received from father to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	252.69	9.36	< 1
Student grade level	1	6.43	6.43	< 1
Student group	2	758.99	379.50	38.46**
Student group x student grade level	2	1.95	.98	< 1
Within	558	5505.61	9.87	

**Significant at the .01 level of probability.

Table 36. Means and standard deviations regarding amount of encouragement student had received from father to attend an area vocational school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.29	3.49
2	Students who planned to attend a four-year college or university.	104	2.64	3.03
3	Students who planned to enter the world of work.	329	2.76	2.99
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean ratings for Groups 2 and 3.

is significantly ($P<.01$) greater than the mean responses of 2.64 and 2.76 for Groups 2 and 3 respectively. Therefore, it may be concluded that students who planned to attend an area vocational school did receive a greater amount of encouragement from their father to attend an area vocational school than did students who planned to attend a four-year college or university and students who planned to enter the world of work. A mean rating of 5.0 or less would indicate the amount of encouragement to be average or less.

Amount of encouragement received from father to attend a four-year college or university

Students were requested to indicate their perception of the amount of encouragement they had received from their father to attend a four-year college or university upon graduation from high school. Table 37 summarizes

Table 37. Analysis of variance summary table for amount of encouragement student had received from father to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	236.78	8.77	1.32
Student grade level	1	7.22	7.22	1.09
Student group	2	1569.83	784.92	118.41**
Student group x student grade level	2	2.21	1.11	<1
Within	558	3698.74	6.63	

**Significant at the .01 level of probability.

the analysis of variance calculation for this variable. A significant ($P<.01$) F ratio of 118.41 was observed for the differences among the mean ratings for students grouped according to their educational plans.

Table 38 summarizes the mean ratings and standard deviations for the data received from this variable. A multiple comparison of the three group means indicated that a mean rating of 6.22 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.53 and 1.30 for Groups 1 and 3 respectively. The mean rating of 2.53 for Group 1 is significantly ($P<.01$) greater than the mean response for Group 2. Therefore, it may be concluded from the ratings received for this variable that the student's father did have an influence as to whether or not the students planned to attend a four-year college or university upon graduation from high school.

Table 38. Means and standard deviations regarding amount of encouragement student had received from father to attend a four-year college or university, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	2.53	3.04
2[b]	Students who planned to attend a four-year college or university.	104	6.22	3.10
3	Students who planned to enter the world of work.	329	1.30	2.14
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 2.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

Amount of encouragement received from mother to attend a postsecondary area vocational school

This item of the rating scale asked that students indicate their perception of the amount of encouragement they had received from their mother to attend an area vocational school upon completion of their high school. The three-way analysis of variance for this variable revealed that an F ratio of 61.80 for differences among the mean ratings for students grouped by their educational plans (Table 39).

The means and standard deviations for this variable are presented in Table 40. A multiple comparison of the three group means revealed that a mean rating of 5.29 for Group 1 is significantly ($P<.01$) greater than the mean ratings of 2.81 and 2.23 for Groups 2 and 3 respectively. Also, a mean rating of 2.81 for Group 2 was found to be significantly ($P<.10$) greater than the mean rating of 2.23 for Group 3. Consequently, it may be concluded that the student's mother had an influence upon the student's plans for attending a postsecondary area vocational school upon graduation from high school.

Amount of encouragement received from mother to attend a four-year college or university

Students were asked to indicate their perception as to the amount of encouragement they had received from their mother to attend a four-year college or university upon graduation from high school. Table 41 summarizes the analysis of variance used in analyzing the data received from variable. An F ratio of 143.30 was observed for differences in the mean ratings of students grouped by their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

The mean ratings and standard deviations for each of the three student groups are presented in Table 42. The Scheffé procedure for multiple

Table 39. Analysis of variance summary table for amount of encouragement student had received from mother to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	293.29	10.86	1.31
Student grade level	1	33.36	33.36	4.03*
Student group	2	1022.34	511.17	61.80**
Student group x student grade level	2	2.21	1.11	<1
Within	558	4615.48	8.27	

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table 40. Means and standard deviations regarding amount of encouragement student had received from mother to attend an area vocational school for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.29	3.24
2[b]	Students who planned to attend a four-year college or university.	104	2.81	2.97
3	Students who planned to enter the world of work.	329	2.23	2.71
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean ratings for Groups 2 and 3.

[b]Mean rating for Group 2 is significantly ($P<.10$) greater than mean rating for Group 3.

comparison revealed that a mean rating of 7.21 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.93 for Group 1 and 1.66 for Group 3. It was also observed that a mean rating of 2.93 for Group 1 is significantly ($P<.01$) greater than a mean rating of 1.66 for Group 3. It may be concluded that students who planned to attend a four-year college or university received a greater amount of encouragement from their mother to attend a four-year college or university than did students who planned to enter the world of work upon graduation from high school. It may also be concluded that students who planned to attend a postsecondary area vocational school received a greater amount of encouragement from their mother to attend a four-year college or university than did students who planned to get a full-time job and not attend college. However, it should be pointed out

Table 41. Analysis of variance summary table for amount of encouragement student had received from mother to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	182.15	6.75	<1
Student grade level	1	1.26	1.26	<1
Student group	2	2103.91	1051.96	143.30**
Student group x student grade level	2	10.41	5.21	<1
Within	558	4096.02	7.34	

**Significant at the .01 level of probability.

Table 42. Means and standard deviations regarding amount of encouragement student had received from mother to attend a four-year college or university, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	2.93	3.15
2[b]	Students who planned to attend a four-year college or university.	104	7.21	2.72
3	Students who planned to enter the world of work.	329	1.66	2.45
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

that students in Groups 1 and 3 indicated a relatively low amount of encouragement from their mother to attend a four-year college or university.

Amount of encouragement received from vocational agriculture instructor to attend a postsecondary area vocational school

Students were requested to indicate their perception of the amount of encouragement they had received from their vocational agriculture instructor to attend a postsecondary area vocational school upon graduation from high school. The analysis of variance summary of this variable is revealed in Table 43. A significant ($P<.01$) F ratio of 2.73 was observed for the variation among schools. It was found that a significant ($P<.01$) F ratio of 11.62 existed for differences in grade level. A significant F ratio of 7.43

Table 43. Analysis of variance summary table for amount of encouragement student had received from vo-ag instructor to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean squares	F ratio
School	27	323.12	19.38	2.73**
Student grade level	1	82.30	82.30	11.62**
Student group	2	105.30	52.65	7.43**
Student group x student grade level	2	7.21	3.61	< 1
Within	558	3951.50	7.08	

**Significant at the .01 level of probability.

was observed for the differences in mean ratings for students grouped according to their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

Table 44 summarizes the mean ratings and standard deviations for students grouped by their educational plans. A multiple comparison of the three group means revealed that a mean rating of 3.75 for Group 1 is significantly ($P<.01$) greater than a mean rating of 2.67 for Group 3. It was also determined that a mean rating of 3.23 for Group 2 is significantly ($P<.10$) greater than a mean rating of 2.67 for Group 3. Therefore, it may be

Table 44. Means and standard deviations regarding amount of encouragement student had received from vo-ag instructor to attend an area vocational school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students sho planned to attend a postsecondary area vocational school.	158	3.75	2.78
2[b]	Students who planned to attend a four-year college or university.	104	3.23	3.10
3	Students who planned to enter the world of work.	329	2.67	2.69

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.10$) greater than mean rating for Group 3.

concluded that students who planned to continue their formal education beyond high school received a greater amount of encouragement from their vocational agriculture instructor to attend an area vocational school than did students

who planned to enter the world of work. However, a mean rating of 3.75 or less for all three groups would indicate a low amount of encouragement received from their vocational agriculture instructor to attend an area vocational school upon graduation from high school.

Amount of encouragement received from vocational agriculture instructor to attend a four-year college or university

This statement of the rating scale asked that students indicate their perception regarding the amount of encouragement they had received from their vocational agriculture instructor to attend a four-year college or university upon graduation from high school. Table 45 summarizes the analysis of variance used to analyze the data for this variable. All sources of variation analyzed were significant at the .05 or .01 level of probability.

The mean ratings and standard deviations for this variable are presented in Table 46. Using the Scheffe' procedure for multiple comparison, it was found that a mean rating of 4.71 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.81 and 1.90 for Groups 1 and 3 respectively. It was also determined that a mean rating of 2.81 for Group 1 is significantly ($P<.01$) greater than a mean rating of 1.90 for Group 3. It may be concluded that students who planned to attend a four-year college or university received a greater amount of encouragement from their vocational agriculture instructor to do so than did students who planned to attend an area vocational school and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school received a greater amount of encouragement from their vo-ag instructor to attend a four-year college or university than did students who planned to enter the world of work upon graduation from high school.

Table 45. Analysis of variance summary table for amount of encouragement student had received from vo-ag instructor to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	361.06	13.37	1.83*
Student grade level	1	85.43	85.43	11.69**
Student group	2	614.34	307.17	42.04**
Student group x student grade level	2	76.71	38.36	5.25**
Within	558	4076.53	7.31	

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table 46. Means and standard deviations regarding amount of encouragement student had received from vo-ag instructor to attend a four-year college or university, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	2.81	2.87
2[b]	Students who planned to attend a four-year college or university.	104	4.71	3.57
3	Students who planned to enter the world of work.	329	1.90	2.46
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

Value of high school vocational agriculture courses completed in preparing for occupation planning to enter

Students were requested to indicate their perception of the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter. The three-way analysis of variance used to analyze the data for this variable appears in Table 47. A significant ($P<.01$) F ratio of 2.50 was observed for variation among schools in response to this statement on the rating scale. No other significant F ratios were observed.

Talbe 48 reveals the means and standard deviations of this variable for students grouped by their educational plans.

Table 47. Analysis of variance summary table for student's perception of value of high school vo-ag courses completed in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	465.53	17.24	2.50**
Student grade level	1	5.10	5.10	< 1
Student group	2	18.20	9.10	1.32
Student group x student grade level	2	25.28	12.64	1.83
Within	558	3856.06	6.91	

**Significant at the .01 level of probability.

Table 48. Means and standard deviations regarding students' perception of value of high school vo-ag courses completed in preparing for occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	5.75	2.52
2	Students who planned to attend a four-year college or university.	104	5.34	2.81
3	Students who planned to enter the world of work.	329	5.27	2.78
	Total	591		

Value of FFA program in preparing for occupation planning to enter

This statement of the rating scale requested that students indicate their perception of the value of their FFA program in preparing them for the occupation they are planning to enter upon completion of their formal education. A summary of the analysis of variance for this variable appears in Table 49. A significant ($P<.01$) F ratio of 3.55 was observed for differences among schools. This would indicate that students from some schools placed a higher value than students from other schools in regard to their perception of the value of their FFA program in preparing them for the occupation they are planning to enter. No significant differences were observed for mean ratings of students grouped according to their educational plans.

The means and standard deviations for this variable are presented in Table 50.

Table 49. Analysis of variance summary table for student's perception of value of FFA program in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	779.47	28.87	3.55**
Student grade level	1	.06	.06	< 1
Student group	2	44.12	22.06	2.71
Student group x student grade level	2	5.66	2.83	< 1
Within	558	4539.63	8.14	

**Significant at the .01 level of probability.

Table 50. Means and standard deviations regarding students' perception of value of FFA program in preparing for occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	4.94	3.06
2	Students who planned to attend a four-year college or university.	104	5.21	2.97
3	Students who planned to enter the world of work.	329	4.88	3.01
	Total	591		

Value of vocational agriculture courses completed in preparing to attend a postsecondary area vocational school

Students participating in this study were asked to indicate their perception of the value of their vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school upon graduation from high school. The analysis of variance summary for this variable is presented in Table 51. An F ratio of 2.71 was calculated for the differences in variation of ratings for this variable among schools. This F ratio with 27 and 558 degrees of freedom is significant at the .01 level of probability. This significant difference received would indicate that students' ratings grouped by school differed as to their perception of the value of their high school vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school. A significant ($P<.01$) F ratio was also observed for the differences in ratings of this statement by students grouped according to their educational plans.

Table 51. Analysis of variance summary table for student's perception of value of vo-ag courses completed in preparing to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	512.32	18.98	2.71**
Student grade level	1	.26	.26	<1
Student group	2	223.63	111.82	15.94**
Student group x student grade level	2	4.93	2.47	<1
Within	558	3913.67	7.01	

**Significant at the .01 level of probability.

Table 52 reveals the means and standard deviations for this variable. A

Table 52. Means and standard deviations regarding students' perception of value of vo-ag courses completed in preparing to attend an area vocational school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.30	2.59
2[b]	Students who planned to attend a four-year college or university.	104	4.92	2.90
3	Students who planned to enter the world of work.	329	4.04	2.77
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

multiple comparison of all group means indicated that a mean rating of 5.30 for Group 1 is significantly ($P<.01$) greater than the mean rating of 4.04 for Group 3. It was also determined that a mean rating of 4.92 for Group 2 is significantly ($P<.01$) greater than the mean rating of 4.04 for Group 3. Therefore, it may be concluded that students who planned to continue their formal education beyond high school perceived the vocational agriculture courses completed as being of greater value in preparing to attend an area vocational school than did students who planned to enter the world of work upon graduation from high school.

Value of vocational agriculture courses completed in preparing to attend a four-year college or university

This statement of the rating scale requested that students indicate their perception of the value of their vocational agriculture courses completed in preparing them to attend a four-year college or university upon graduation from high school. A summary of the analysis of variance used to analyze the ratings received from this statement appears in Table 53. A significant ($P<.01$) F ratio of 2.23 was observed for the variation among schools in response to this variable. It was also determined that a significant ($P<.01$) F ratio of 26.14 exists for ratings of this statement by students grouped according to their educational plans upon graduation from high school.

The means and standard deviations for student ratings grouped by their educational plans are summarized in Table 54. Using the Scheffe' method of multiple comparison, it was determined that a mean rating of 5.25 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 3.92 and 3.13 for Groups 1 and 3 respectively. It was also found that a mean rating of 3.92 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.13 for Group 3. From the analysis of this variable, it may be concluded that students who planned to attend a four-year college or university indicated a higher value for vocational agriculture courses completed in preparing to attend a four-year college or university than did students who planned to get a full-time job. It may also be concluded that students who planned to attend an area vocational school perceived their vocational agriculture courses to be of greater value in preparing to attend a four-year college or university than did students who planned to get a full-time job upon graduation from high school.

Table 53. Analysis of variance summary table for student's perception of value of vo-ag courses completed in preparing to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	401.27	14.86	2.23**
Student grade level	1	4.30	4.30	<1
Student group	2	347.94	173.97	26.14**
Student group x student grade level	2	12.56	6.28	<1
Within	558	3713.25	6.66	

** Significant at the .01 level of probability.

Table 54. Means and standard deviations regarding students' perception of value of vo-ag courses completed in preparing to attend a four-year college or university, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	3.92	2.66
2[b]	Students who planned to attend a four-year college or university.	104	5.25	2.55
3	Students who planned to enter the world of work.	329	3.13	2.68
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Groups 1 and 3.

Value of high school courses completed in preparing to attend a postsecondary area vocational school

This item of the rating scale asked that students indicate their perception of the value of their high school courses completed in preparing them to attend a postsecondary area vocational school upon graduation from high school. Table 55 reveals the analysis of variance summary for mean ratings received from this statement. A significant ($P<.05$) F ratio of 1.64 was observed for variation among mean ratings of students from different high schools. A significant ($P<.01$) F ratio of 33.71 was calculated for the differences among mean ratings of students grouped by their educational plans.

Table 56 reveals the means and standard deviations for this variable. Using a multiple comparison for all group means, it was found that a mean

Table 55. Analysis of variance summary table for student's perception of value of high school courses completed in preparing to attend an area vocational school, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	294.79	10.92	1.64*
Student grade level	1	.01	.01	<1
Student group	2	450.12	225.06	33.71**
Student group x student grade level	2	14.63	7.32	1.10
Within	558	3725.26	6.68	

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table 56. Means and standard deviations regarding students' perception of value of high school courses completed in preparing to attend an area vocational school, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.65	2.35
2[b]	Students who planned to attend a four-year college or university.	104	5.44	2.64
3	Students who planned to enter the world of work.	329	3.88	2.73
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

rating of 5.65 for Group 1 is significantly ($P<.01$) greater than the mean rating of 3.88 for Group 3. A mean rating of 5.44 for Group 2 is significantly ($P<.01$) greater than a mean rating of 3.88 for Group 3. It may therefore be concluded that students who planned to receive formal education beyond high school placed a greater value on their high school courses completed in preparing to attend an area vocational school than did students who planned to enter the world of work.

Value of high school courses completed in preparing to attend a four-year college or university

Students were requested to indicate their perception of the value of their high school courses completed in preparing them to attend a four-year

college or university upon graduation from high school. The three-way analysis of variance used in analyzing the data for this variable appears in Table 57. A significant ($P<.01$) F ratio of 52.45 was observed for differences in mean ratings among students grouped according to their educational plans.

The means and standard deviations for this variable are presented in Table 58. It was determined by multiple comparison that a mean rating of 6.79 for Group 2 is significantly ($P<.01$) greater than mean ratings of 4.44 and 3.57 for Groups 1 and 2 respectively. It was also found that a mean rating of 4.44 for Group 1 is significantly ($P<.01$) greater than a mean response of 3.57 for Group 3. Therefore, it may be concluded that students who planned to attend a four-year college or university placed a greater value on their high school courses in preparing them to attend a four-year college or university than did students who planned to attend an area vocational school and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school placed a greater value on their high school courses completed in preparing to attend a four-year college or university than did students who planned to enter the world of work.

Value of supervised occupational experience program in preparing for occupation planning to enter

The students participating in this study were requested to indicate their perception of the value of their supervised occupational experience program in preparing them for the occupation they planned to enter upon graduation from high school. A summary of the analysis of variance for this variable is presented in Table 59. A significant ($P<.01$) F ratio of 2.70 was calculated for variation among mean ratings of students from

Table 57. Analysis of variance summary table for student's perception of value of high school courses completed in preparing to attend a four-year college or university, among students who planned to attend an area vocational school, students who planned to attend four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	276.62	10.25	1.41
Student grade level	1	7.98	7.98	1.10
Student group	2	762.66	381.33	52.45**
Student group x student grade level	2	.43	.22	<1
Within	558	4036.87	7.27	

**Significant at the .01 level of probability.

Table 58. Means and standard deviations regarding students' perception of value of high school courses completed in preparing to attend a four-year college or university, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	4.44	2.73
2[b]	Students who planned to attend a four-year college or university.	104	6.79	2.41
3	Students who planned to enter the world of work.	329	3.57	2.80
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

various schools participating. No significant F ratio was observed for mean ratings of students grouped according to their educational plans upon graduation from high school.

The means and standard deviations for mean ratings of students grouped according to their educational plans are presented in Table 60. A mean rating of 5.75 or less for the three student groups would indicate approximately average or less rating for students' perception of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter.

Table 59. Analysis of variance summary table for student's perception of value of supervised occupational experience program in preparing for occupation planning to enter, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	639.67	23.69	2.70**
Student grade level	1	6.07	6.07	<1
Student group	2	39.59	19.80	2.26
Student group x student grade level	2	29.52	14.76	1.68
Within	558	4899.12	8.78	

**Significant at the .01 level of probability.

Table 60. Means and standard deviations regarding students' perception of value of supervised occupational experience program in preparing for occupation planning to enter, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	5.75	2.79
2	Students who planned to attend a four-year college or university.	104	5.37	3.14
3	Students who planned to enter the world of work.	329	5.05	3.18
	Total	591		

Chances of success as a student attending a four-year college or university and studying animal science

This item of the rating scale asked that students indicate their perception of their chances for success as a student if they were to attend a four-year college or university and study animal science. Table 61 summarizes the analysis of variance used to analyze the data received from this variable. A significant ($P<.01$) F ratio of 45.86 was observed for differences among mean ratings by students grouped according to their educational plans upon graduation from high school.

Table 62 summarizes the means and standard deviations for this variable. The Scheffe' procedure for multiple comparison revealed that a mean rating of 6.64 for Group 2 is significantly ($P<.01$) greater than the mean rating of 4.37 and 3.57 for Groups 1 and 3 respectively. It was also determined that a mean rating of 4.37 for Group 1 is significantly ($P<.01$) greater than a

Table 61. Analysis of variance summary table for student's perception of chances of success as student if attended a four-year college or university in animal science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	190.10	7.04	<1
Student grade level	1	0.0	0.0	<1
Student group	2	653.70	326.85	45.86**
Student group x student grade level	2	4.33	2.17	<1
Within	558	4158.58	7.45	

** Significant at the .01 level of probability.

Table 62. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in animal science, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	4.37	2.86
2[b]	Students who planned to attend a four-year college or university.	104	6.64	2.47
3	Students who planned to enter the world of work.	329	3.57	2.73
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

mean rating of 3.57 for Group 3. Therefore, it may be concluded that students who planned to attend a four-year college or university indicated a greater chance for success as a student if they were to attend a four-year college or university and study animal science, than did students who planned to attend an area vocational school and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school indicated a greater chance for success as a student if they were to attend a four-year college or university and study animal science than did students who planned to enter the world of work.

Chances of success as a student attending a four-year college or university and studying plant and soil science

Students were requested to indicate their perception of their chances for success as a student attending a four-year college or university and studying plant and soil science. The analysis of variance calculation for this variable appears in Table 63. A three-way analysis of variance revealed an F ratio of 35.53 for the mean ratings of students grouped according to their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

The means and standard deviations for this variable are summarized in Table 64. A multiple comparison of the three group means revealed that a mean rating of 5.71 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 3.86 and 3.13 for Groups 1 and 3 respectively. A mean rating of 3.86 for Group 1 was found to be significantly ($P<.05$) greater than a mean rating of 3.13 for Group 3. From the analysis of this variable, it may be concluded that students who planned to attend a four-year college or university indicated a greater chance for success as a student attending a four-year college or university studying plant and soil science than did students who planned to attend an area vocational school and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school indicated a greater chance of success as a student attending a four-year college or university studying plant and soil science than students who planned to get a full-time job after graduation from high school.

Chances of success as a student attending a four-year college or university and studying agricultural mechanics

This statement of the rating scale requested that students indicate their perception of their chances for success as a student attending a

Table 63. Analysis of variance summary table for student's perception of chances of success as student if attended a four-year college or university in plant and soil science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	268.88	9.96	1.52
Student grade level	1	.02	.02	<1
Student group	2	465.25	232.63	35.53**
Student group x student grade level	2	11.56	5.78	<1
Within	558	3654.03	6.55	

**Significant at the .01 level of probability.

Table 64. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in plant and soil science, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	3.86	2.72
2[b]	Students who planned to attend a four-year college or university.	104	5.71	2.46
3	Students who planned to enter the world of work.	329	3.13	2.57
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.05$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Groups 1 and 3.

four-year college or university and studying agricultural mechanics upon graduation from high school. The three-way analysis of variance calculation is summarized in Table 65. From this analysis, it was determined that a significant ($P<.01$) F ratio of 5.37 existed for differences in mean ratings of students grouped by their educational plans.

Table 66 reveals the means and standard deviations for the three student groups. A multiple comparison of all group means indicated that a mean rating of 5.82 for Group 1 is significantly ($P<.05$) greater than a mean rating of 4.88 for Group 3. It was also revealed that a mean rating of 5.81 for Group 2 is significantly ($P<.05$) greater than the mean rating of 4.88 for Group 3. It may be concluded that students who planned to

Table 65. Analysis of variance summary table for student's perception of chances of success as a student if attended a four-year college or university in agricultural mechanics, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	237.98	8.81	1.12
Student grade level	1	11.42	11.42	1.45
Student group	2	84.59	42.30	5.37**
Student group x student grade level	2	34.23	17.12	2.18
Within	558	4390.18	7.87	

**Significant at the .01 level of probability.

Table 66. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in agricultural mechanics, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.82	2.74
2[b]	Students who planned to attend a four-year college or university.	104	5.81	2.49
3	Students who planned to enter the world of work.	329	4.88	2.97
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.05$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.05$) greater than mean rating for Group 3.

receive formal education beyond high school indicated a greater chance for success as a student attending a four-year college or university and studying agricultural mechanics than did students who planned to enter the world of work upon graduation from high school.

Chances of success as a student attending a four-year college or university and studying agricultural management

Students were asked to indicate their chances of success as a student if they were to attend a four-year college or university and study agricultural management. A significant ($P<.01$) F ratio of 31.83 was calculated for differences in mean ratings of students grouped according to their educational plans (Table 67).

Table 67. Analysis of variance summary table for student's perception of chances of success as a student if attended a four-year college or university in agricultural management, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	301.43	11.16	1.74
Student grade level	1	2.56	2.56	<1
Student group	2	408.70	204.35	31.83**
Student group x student grade level	2	23.72	11.86	1.85
Within	558	3582.28	6.42	

**Significant at the .01 level of probability.

The means and standard deviations for this variable appear in Table 68. A multiple comparison using the Scheffe' technique revealed that a mean rating of 6.71 for Group 2 is significantly ($P<.01$) greater than a mean rating of 5.22 and 4.23 for Groups 1 and 3 respectively. It was also found that a mean rating of 5.22 for Group 1 is significantly ($P<.01$) greater

Table 68. Means and standard deviations regarding students' perception of chances for success as a student if attended a four-year college or university in agricultural management, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.22	2.79
2[b]	Students who planned to attend a four-year college or university.	104	6.71	2.21
3	Students who planned to enter the world of work.	329	4.23	2.59
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

than a mean rating of 4.23 for Group 3. It may therefore be concluded that students who planned to attend a four-year college or university indicated a greater chance of success as a student attending a four-year college or university studying agricultural management than did students who planned to get a full-time job. It may also be concluded that students who planned to attend an area vocational school indicated a greater chance for

success as a student attending a four-year college or university studying agricultural management than did students who planned to get a full-time job upon graduation from high school.

Chances of success as a student attending an area vocational school and studying animal science

This item of the rating scale requested students to indicate their perception of success as a student if they were to attend a postsecondary area vocational school and study animal science. The three-way analysis of variance used to analyze the ratings received from this statement are summarized in Table 69. A significant ($P<.01$) F ratio of 38.83 was observed for the differences in mean ratings among students grouped according to their educational plans upon graduation from high school.

Table 70 reveals the means and standard deviations for this variable. It was determined that a mean rating of 6.69 for Group 2 is significantly ($P<.01$) greater than mean ratings of 5.12 and 3.90 for Groups 1 and 3 respectively. It was also found that a mean rating of 5.12 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.90 for Group 3. From the analysis of this variable, it may be concluded that students who planned to attend a four-year college or university indicated a greater chance of success as a student attending an area vocational school and studying animal science, than did students who planned to attend an area vocational school and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school were more certain of success as a student attending an area vocational school and studying animal science than students who planned to enter the world of work upon graduation from high school.

Table 69. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in animal science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	310.37	11.50	1.55
Student grade level	1	1.36	1.36	<1
Student group	2	575.92	287.96	38.83**
Student group x student grade level	2	23.81	11.91	1.61
Within	558	4137.63	7.42	

** Significant at the .01 level of probability.

Table 70. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in animal science, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	5.12	2.97
2[b]	Students who planned to attend a four-year college or university.	104	6.69	2.55
3	Students who planned to enter the world of work.	329	3.90	2.72
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Groups 1 and 3.

Chances of success as a student attending an area vocational school and studying plant and soil science

This statement of the rating scale asked that students indicate their chances of success as a student if they were to attend a postsecondary area vocational school and study plant and soil science. Table 71 summarizes the three-way analysis of variance used in analyzing the data from this variable. A significant ($P<.01$) F ratio of 25.52 was observed for the differences in mean ratings of students grouped according to their educational plans.

The means and standard deviations for this variable appear in Table 72. A multiple comparison of the group means revealed that a mean rating of 5.78 for Group 2 is significantly ($P<.01$) greater than the mean ratings

Table 71. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in plant and soil science, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	349.95	12.96	1.87
Student grade level	1	11.02	11.02	1.59
Student group	2	354.53	177.63	25.52**
Student group x student grade level	2	3.98	1.99	<1
Within	558	3876.30	6.95	

**Significant at the .01 level of probability.

Table 72. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in plant and soil science, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	4.72	2.78
2[b]	Students who planned to attend a four-year college or university.	104	5.78	2.79
3	Students who planned to enter the world of work.	329	3.62	2.62
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean ratings for Groups 1 and 3.

of 4.72 and 3.62 for Groups 1 and 3 respectively. It was also found that a mean rating of 4.72 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.62 for Group 3. It may thus be concluded that students who planned to attend a four-year college or university were more certain of success if they were to attend an area vocational school and study plant and soil science than certainty expressed by students who planned to attend an area vocational school and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school were more certain of success if they were to attend an area vocational school and study plant and soil science than certainty expressed by students who planned to enter the world of work upon

graduation from high school.

Chances of success as a student attending an area vocational school and studying agricultural mechanics

Students were requested to indicate how they would rate their chances of success if they were to attend a postsecondary area vocational school and study agricultural mechanics. The three-way analysis of variance is summarized in Table 73. An F ratio of 12.65 was observed for differences among mean ratings of students grouped according to their educational plans upon graduation from high school. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

Table 74 reveals the means and standard deviations for this variable. A multiple comparison of the three group means indicated that a mean rating of 6.98 is significantly ($P<.01$) greater than the mean ratings of 5.95 and 5.51 for Groups 2 and 3 respectively. From this analysis, it may be concluded that students who planned to attend an area vocational school were more certain of their success as a student if they attended an area vocational school and studied agricultural mechanics than the certainty expressed by students who planned to attend a four-year college or university and students who planned to enter the world of work.

Chances of success as a student attending an area vocational school and studying agricultural management

This item of the rating scale asked that students indicate their chances of success if they were to attend an area vocational school and study agricultural management. Table 75 summarizes the analysis of variance used in analyzing the data received from this variable. A three-way analysis of variance revealed a significant ($P<.05$) F ratio of 1.65 for mean ratings of students grouped by their high school attending. A significant ($P<.01$) F ratio of 26.95 was observed for differences among the ratings

Table 73. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in agricultural mechanics, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	183.15	6.78	<1
Student grade level	1	18.70	18.70	2.52
Student group	2	187.35	93.68	12.65**
Student group x student grade level	2	41.34	20.67	2.79
Within	558	4133.74	7.41	

**Significant at the .01 level of probability.

Table 74. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in agricultural mechanics, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	6.98	2.34
2	Students who planned to attend a four-year college or university.	104	5.95	2.54
3	Students who planned to enter the world of work.	329	5.51	2.96
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean ratings for Groups 2 and 3.

for students grouped according to their educational plans.

The means and standard deviations for this variable are presented in Table 76. Using the Scheffe' method for multiple comparison, it was determined that mean ratings of 6.28 for Group 1 and 6.72 for Group 2 are significantly greater than the mean rating of 4.70 for Group 3. Therefore, it may be concluded that students who planned to attend an area vocational school or a four-year college or university indicated a greater chance for success if they were to attend an area vocational school and study agricultural management than did students who planned to get a full-time job upon graduation from high school.

Students' Level of Achievement in Agriculture

Animal Science Achievement Test scores

Hypothesis 2 stated that there will be significant differences in

Table 75. Analysis of variance summary table for student's perception of chances of success as a student if attended an area vocational school in agricultural management, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	308.11	11.41	1.65*
Student grade level	1	21.36	21.36	3.10
Student group	2	371.86	185.93	26.95**
Student group x student grade level	2	18.73	9.37	1.36
Within	558	3849.92	6.90	

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

Table 76. Means and standard deviations regarding students' perception of chances for success as a student if attended an area vocational school in agricultural management, for students grouped by their educational plans

Group number	Student group	Number	Mean rating	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	6.28	2.61
2[b]	Students who planned t attend a four-year college or university.	104	6.72	2.40
3	Students who planned to enter the world of work.	329	4.70	2.80
	Total	591		

[a]Mean rating for Group 1 is significantly ($P<.01$) greater than mean rating for Group 3.

[b]Mean rating for Group 2 is significantly ($P<.01$) greater than mean rating for Group 3.

Animal Science Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school.

The data utilized in testing this hypothesis were collected using the Agribusiness Achievement Test developed by Peterson, et al. The raw scores from this test were transformed to standard scores for analysis.

A three-way analysis of variance was used to analyze the data received from the Animal Science Test scores. A summary of the analysis of variance for this variable appears in Table 77. The sources of variation that were tested are as follows; schools, student grade level (junior or senior), and student group (grouped according to educational plans). An F ratio of

Table 77. Analysis of variance summary table for animal science achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	7741.22	286.71	4.48**
Student grade level	1	345.08	345.08	5.39*
Student group	2	3243.24	1621.62	25.32**
Student group x student grade level	2	13.39	6.70	<1
Within	558	35732.17	64.04	

**Significant at the .01 level of probability.

*Significant at the .05 level of probability.

4.48 was observed for differences in students' mean Animal Science Test scores among the various schools participating in the study. This F ratio with 27 and 558 degrees of freedom is significant at the .01 level of probability. A significant ($P<.05$) F ratio of 5.39 was observed for mean Animal Science Test scores between junior and senior vocational agriculture students. An F ratio of 25.32 was also observed for differences in mean Animal Science Test scores of students grouped according to their educational plans upon graduation from high school. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

The mean Animal Science Achievement Test scores for students grouped by their educational plans are presented in Table 78. The Scheffe' procedure for multiple comparison was used to compare all possible pairs of

Table 78. Mean animal science achievement test scores for students grouped by their educational plans

Group number	Student group	Number	Mean score	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	57.53	8.19
2[b]	Students who planned to attend a four-year college or university.	104	61.67	8.72
3	Students who planned to enter the world of work.	329	55.30	8.88
	Total	591		

[a]Mean score for Group 1 is significantly ($P<.01$) greater than mean score for Group 3.

[b]Mean score for Group 2 is significantly ($P<.01$) greater than mean scores for Groups 1 and 3.

group means. Using this procedure, it was determined that a mean score of 61.67 for Group 2 is significantly ($P<.01$) greater than the mean scores of 57.53 and 55.30 for Groups 1 and 3 respectively. It was also found that a mean score of 57.53 for Group 1 is significantly ($P<.01$) greater than the mean score of 57.02 for Group 3. From the analysis of these Animal Science Achievement Test scores, it may be concluded that students who planned to attend a four-year college or university possessed a higher level of achievement in animal science than students who planned to attend an area vocational school and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school possessed a higher level of achievement in animal science than did students who planned to enter the world of work upon graduation from high school.

Plant and Soil Science Achievement Test scores

Hypothesis 3 stated that there will be significant differences in Plant and Soil Science Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school. Data used in testing this hypothesis were collected by use of the Peterson Agribusiness Achievement Test.

The three-way analysis of variance used in analyzing the data received from this variable is summarized in Table 79. A significant ($P<.01$) F ratio of 9.06 was observed for the variation in mean scores among students from various schools sampled. A significant ($P<.01$) F ratio of 26.04 was observed for differences in mean Plant and Soil Science Test scores among students grouped by their educational plans. It should also be pointed out that a significant ($P<.05$) interaction was observed between student grade level and student group.

Table 79. Analysis of variance summary table for plant and soil science achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	15373.31	569.38	9.06**
Student grade level	1	202.79	202.79	3.23
Student group	2	3271.60	1635.80	26.04**
Student group x student grade level	2	238.35	240.35	3.83*
Within	558	35051.73	62.82	

**Significant at the .01 level of probability.

*Significant at the .05 level of probability.

Table 80 reveals the means and standard deviations for Plant and Soil Science Test scores of students grouped according to their educational

Table 80. Mean plant and soil science achievement test scores for students grouped by their educational plans

Group number	Student group	Number	Mean score	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	55.63	9.16
2[b]	Students who planned to attend a four-year college or university.	104	60.99	8.24
3	Students who planned to enter the world of work.	329	53.47	9.70
	Total	591		

[a]Mean score for Group 1 is significantly ($P<.01$) greater than mean score for Group 3.

[b]Mean score for Group 2 is significantly ($P<.01$) greater than mean scores for Groups 1 and 3.

plans. It was determined by multiple comparison that a mean Plant and Soil Science Test score of 60.99 is significantly ($P<.01$) greater than the mean scores of 55.63 and 53.47 for Groups 1 and 3 respectively. A mean score of 55.63 for Group 1 is significantly ($P<.01$) greater than a mean score of 53.47 for Group 3. Therefore, it may be concluded that students who planned to attend a four-year college or university possessed a higher level of achievement in plant and soil science than students who planned to attend an area vocational school. It may also be concluded that students who planned to attend an area vocational school possessed a higher level of achievement in plant and soil science than students who

planned to get a full-time job upon graduation from high school.

Agricultural Mechanics Achievement Test scores

Hypothesis 4 stated that there will be significant differences in Agricultural Mechanics Achievement Test scores among high school vocational agriculture students grouped according to their stated educational plans upon graduation from high school. The data utilized in testing this hypothesis were collected by using the Peterson Agribusiness Achievement Test.

A summary of the analysis of variance used in analyzing the data for this variable appears in Table 81. It was determined that a significant ($P<.01$) F ratio of 6.80 existed for differences in mean test scores among students from the various schools. A significant ($P<.01$) F ratio of 6.99 was observed for the differences in mean scores for student grade level as a source of variation in the analysis of variance calculation. No significant F ratio was observed for differences in mean scores among students grouped by their educational plans.

The mean scores and standard deviations for students grouped by their educational plans are presented in Table 82.

Agricultural Management Achievement Test scores

Hypothesis 5 stated that there will be significant differences in Agricultural Management Achievement Test scores among vocational agriculture students grouped according to their stated educational plans upon graduation from high school. The data utilized in testing this hypothesis were collected by use of the Peterson Agribusiness Achievement Test.

Table 83 summarizes the three-way analysis of variance used in analyzing the data for this variable. A significant ($P<.01$) F ratio of 9.57 was observed for differences among schools. It was also determined that

Table 81. Analysis of variance summary table for agricultural mechanics achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	11312.14	418.97	6.80**
Student grade level	1	430.73	430.73	6.99**
Student group	2	274.35	157.18	2.23
Student group x student grade level	2	15.57	7.79	<1
Within	558	34379.18	61.61	

**Significant at the .01 level of probability.

Table 82. Mean agricultural mechanics achievement test scores for students grouped by their educational plans

Group number	Student group	Number	Mean score	Standard deviation
1	Students who planned to attend a postsecondary area vocational school.	158	59.56	8.92
2	Students who planned to attend a four-year college or university.	104	61.39	8.78
3	Students who planned to enter the world of work.	329	58.46	8.89
	Total	591		

an F ratio of 18.04 existed for differences in mean test scores among students grouped by their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability.

The mean scores and standard deviations for this variable are revealed in Table 84. Using the Scheffe' method of multiple comparison for group means, it was determined that a mean score of 63.21 for Group 2 is significantly ($P<.01$) greater than the mean test scores of 58.48 and 56.47 for Groups 1 and 3 respectively. A mean score of 58.48 for Group 1 is significantly ($P<.01$) greater than the mean score of 56.47 for Group 3. From the analysis of this variable, it may be concluded that students who planned to attend a four-year college or university possessed a higher level of achievement in agricultural management than students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school possessed a higher level of achievement in agricultural management than students who planned to enter the world of work upon

Table 83. Analysis of variance summary table for agricultural management achievement test scores, among students who planned to attend an area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work

Source of variation	Degrees of freedom	Sum of squares	Mean square	F ratio
School	27	19089.92	707.03	9.57**
Student grade level	1	216.70	216.70	2.93
Student group	2	2666.33	1333.17	18.04**
Student group x student grade level	2	162.58	81.29	1.10
Within	558	41232.46	73.89	

**Significant at the .01 level of probability.

Table 84. Mean agricultural management achievement test scores for students grouped by their educational plans

Group number	Student group	Number	Mean score	Standard deviation
1[a]	Students who planned to attend a postsecondary area vocational school.	158	58.48	9.74
2[b]	Students who planned to attend a four-year college or university.	104	63.21	9.68
3	Students who planned to enter the world of work.	329	56.47	10.54
	Total	591		

[a]Mean score for Group 1 is significantly ($P<.01$) greater than mean score for Group 3.

[b]Mean score for Group 2 is significantly ($P<.01$) greater than mean scores for Groups 1 and 3.

graduation from high school.

Relationship of Personal, Family and Community Variables to Agribusiness Achievement Test Scores

One of the objectives of this research study was to determine if there is a relationship between selected personal, family and community variables, and Agribusiness Achievement Test scores. The data required to test this relationship were collected using the Personal, Family and Community Data Questionnaire (see Appendix A), and the Agribusiness Achievement Test developed by Peterson, et al. (26)

The data collected from these instruments were analyzed using the Pearson product-moment correlation. This statistic was used to determine the

relationship between personal, family and community variables, and Agribusiness Achievement Test scores.

The items on the questionnaire which yield a mean response score that is ordered from low to high were analyzed using the coefficient of correlation. Students' mean responses to these items were correlated with students' standard scores for each of the following Agribusiness Achievement Tests:

A. Animal Science.

B. Plant and Soil Science.

C. Agricultural Mechanics.

D. Agricultural Management.

Relationship of Personal, Family and Community Variables to Animal Science Achievement Test Scores

Students' responses to certain items on the personal, family and community data questionnaire were correlated with students' standard scores on the Animal Science Achievement Test.

Table 85 presents the relationship of the personal, family and community variables to the Animal Science Achievement Test scores. From the information presented in this table the following observations may be made.

An analysis of the relationship between semesters of vocational agriculture completed, and students' Animal Science Test scores revealed a correlation coefficient of .20. This coefficient with 626 degrees of freedom is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between the two variables tested in this analysis. This relationship indicates that students who had completed a greater number of semesters of vocational agriculture received higher Animal Science Test Scores.

A correlation coefficient of -.37 was observed for the relationship between grades students received in vocational agriculture and students'

Table 85. Intercorrelations among personal, family, and community variables, and agribusiness achievement test scores[a]

Variables	1	2	3	4	5	6	7
1		.06	.01	.04	.11**	.15**	.16**
2			.66***	-.40***	-.04	-.11**	.15***
3				-.42***	-.02	-.08*	-.12**
4					-.08*	.00	-.03
5						.59***	.51***
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							

[a]These variables are described by variable number in the variable identification following this matrix.

*Significant at the .05 level of probability.

**Significant at the .01 level of probability.

***Significant at the .001 level of probability.

8	9	10	11	12	13	14	15	16
.13***	.16***	.08*	.12***	.17*	.03	.03	.01	.08*
.00	-.10**	-.19***	-.16***	-.25***	-.26***	-.07*	-.34***	-.08**
.04	-.05	-.15	-.14	-.24	-.28***	-.08*	-.36***	-.13***
-.26***	-.10**	.10**	.05	.44***	.45***	.04	.58***	.13***
.39***	.41***	.09**	.06	.00	-.04	.03	-.10**	.04
.36***	.38***	.19***	.14***	.09**	.06	.08*	-.01	.12**
.51***	.58***	.20***	.19***	.04	.02	.03	-.01	.04
	.69***	.24***	.31***	-.07*	-.13***	.06	-.14***	.04
		.33***	.32***	.01	-.04	.03	-.05	.01
			.74***	.20***	.18***	.17***	.16***	.18***
				.18***	.15***	.17***	.15***	.16***
					.75***	.55***	.63***	.42***
						.43***	.53***	.54***
							.27***	.65***
								.23***

Table 85 (Continued)

17	18	19	20	21	22	23	24
.04	.15***	.13***	.14***	.21***	.17***	.12***	.12***
-.34***	-.09**	-.26***	-.19***	-.23***	-.21***	-.28***	-.25***
-.40***	-.11**	-.28***	-.14***	-.13***	-.21***	-.29***	-.31***
.58***	07*	.33***	.01	.04	.16***	.32***	.27***
-.11**	.05	.00	.21***	.13***	.08	.06	.05
-.02	.15***	.12**	.22***	.20***	.16***	.12**	.12**
-.02	.10**	.07	.28***	.27***	.15***	.11***	.09**
-.16***	.12***	-.05	.31***	.25***	.08*	.04	.02
-.06***	.12***	.05	.32***	.27***	.10**	.11**	.10**
.13***	.26***	.21***	.49***	.40***	.36***	.32***	.34***
.13***	.30***	.21***	.51***	.42***	.36***	.30***	.34***
.48***	.23***	.35***	.20***	.16***	.30***	.32***	.32***
.61***	.25***	.33***	.16***	.17***	.27***	.26***	.33***
.18***	.30***	.16***	.22***	.16***	.31***	.19***	.30***
.79***	.23***	.47***	.15***	.15***	.28***	.43***	.34***
.30***	.40***	.25***	.21***	.18***	.37***	.22***	.39***
	.24***	.49***	.14***	.16***	.27***	.43***	.34***
		.69***	.36***	.31***	.47***	.43***	.43***
			.28***	.28***	.41***	.54***	.43***
				.60***	.50***	.43***	.42***
					.44***	.39***	.31***
						.71***	.65***
							.64***

25	26	27	28	29	30	31	32
.06	.18***	.10**	.05	.07*	.12***	.09**	.07*
-.30***	-.22***	-.42***	-.39***	-.20***	-.37***	-.39***	-.35***
-.40	-.13	-.44	-.41	-.21	-.40	-.41	-.37
.42***	.03	.40***	.35***	.10**	.31***	.37***	.30***
.02	.21***	.02	.04	.10**	.12***	.04	.05
.10**	.19***	.09**	.08*	.15***	.16***	.11**	.09**
.12***	.23***	.17***	.13***	.21***	.27***	.14***	.15***
-.05	.31***	.00	-.03	.12**	.10**	-.02	-.01
.08*	.29***	.10**	.07*	.17***	.18***	.12***	.09**
.29***	.31***	.22***	.20***	.16***	.26***	.24***	.25***
.26***	.39***	.23***	.23***	.13***	.26***	.22***	.26***
.34***	.20***	.29***	.27***	.17***	.26***	.31***	.30***
.34***	.14***	.32***	.27***	.17***	.26***	.31***	.29***
.13***	.24***	.15***	.11**	.11**	.10**	.19***	.20***
.46***	.18***	.40***	.36***	.21***	.34***	.37***	.32***
.19***	.22***	.17***	.15***	.12**	.17***	.22***	.23***
.50***	.15***	.44***	.39***	.21***	.37***	.40***	.35***
.31***	.30***	.18***	.18***	.20***	.25***	.25***	.26***
.48***	.22***	.33***	.31***	.18***	.32***	.33***	.32***
.27***	.52***	.24***	.22***	.18	.31***	.27***	.27***
.27***	.45***	.26***	.20***	.05	.29***	.26***	.22***
.48***	.39***	.26***	.27***	.19***	.35***	.32***	.34***
.69***	.37***	.41***	.37***	.26***	.43***	.38***	.37***
.66***	.36***	.34***	.32***	.22***	.34***	.37***	.38***
	.39***	.49***	.42***	.26***	.45***	.40***	.39***
		.30***	.23***	.20***	.33***	.25***	.27***
			.72***	.36***	.62***	.70***	.61***
				.51***	.72***	.72***	.81***
					.60***	.36***	.45***
						.66***	.69***
							.81***

Table 85 (Continued)

33	34	35	36	37	38
.11**	.15***	.20***	.13***	.08*	.11**
-.15***	-.36***	-.37***	-.35***	-.24***	-.32***
-.15***	-.34***	-.39***	-.39***	-.27***	-.36***
.06	.28***	.26***	.28***	.13***	.23***
.06	.11**	.03	-.02	.00	-.04
.12**	.15***	.13***	.05	.06	.04
.21***	.25***	.16***	.07*	.10**	.09**
.13**	.12**	.07*	.02	.10**	.06
.17***	.18***	.13***	.08*	.11**	.08*
.19***	.29***	[illegible]	.19***	.09**	.20***
.14***	.26***	.19**	.21***	.08*	.22***
.19***	.31***	.18***	.15***	.10**	.16***
.20***	.28***	.16***	.14***	.10**	.15***
.23***	.24***	.15**	.04	.07*	.09**
.13***	.30***	.26***	.23***	.11**	.23***
.22***	.26***	.12**	.07*	.03	.12**
.13***	.31***	.27***	.27***	.14***	.26***
.25***	.29***	.14***	.11**	.10**	.19***
.17***	.29***	.24***	.23***	.17***	.28***
.20***	.37***	.23***	.17***	.17***	.23***
.05	.29***	.22***	.18***	.07*	.19***
.25***	.40***	.24***	.23***	.12***	.22***
.20***	.39***	.28***	.27***	.13***	.27***
.24***	.38***	.29***	.28***	.19***	.31***
.18***	.36***	.25***	.25***	.12**	.26***
.21***	.36***	.21***	.17***	.10**	.25***
.24***	.48***	.34***	.36***	.22***	.36***
.38***	.59***	.28***	.38***	.23***	.35***
.75***	.45***	.14***	.21***	.24***	.17***
.45***	.78***	.34***	.39***	.24***	.38***
.36***	.66***	.36***	.41***	.23***	.37***
.44***	.69***	.32***	.38***	.23***	.36***
	.55***	.12**	.17***	.24***	.14***
		.35***	.39***	.27***	.37***
			.68***	.53***	.63***
				.62***	.78***
					.65***

Table 85 (Continued) Variable identification for correlation matrix

Matrix variable	Description
1	Semesters of vocational agriculture completed.
2	Grades received in vocational agriculture.
3	Grades received in all courses.
4	Years of posthigh school education planned.
5	Amount of certainty that I will enter the occupation I have chosen.
6	Amount of thought I have given to my choice of occupation.
7	My ability for the occupation I have chosen.
8	Amount of work experience I have had in the occupation I plan to enter.
9	My knowledge of the occupation I plan to enter.
10	Value of my high school training for the occupation I plan to enter.
11	Amount of training my high school has provided for the occupation I plan to enter.
12	Amount of encouragement received from my father to continue my education beyond high school.
13	Amount of encouragement received from my mother to continue my education beyond high school.
14	Amount of encouragement received from my father to attend a postsecondary area vocational school.
15	Amount of encouragement received from my father to attend a four-year college or university.
16	Amount of encouragement received from my mother to attend a post-secondary area vocational school.
17	Amount of encouragement received from my mother to attend a four-year college or university.
18	Amount of encouragement received from my vo-ag instructor to attend a postsecondary area vocational school.

Table 5 (Continued)

Matrix variable	Description
19	Amount of encouragement received from my vo-ag instructor to attend a four-year college or university.
20	Value of my high school vo-ag courses completed in preparing me for the occupation I plan to enter.
21	Value of the FFA program in preparing me for the occupation I plan to enter
22	Value of my vo-ag courses completed in preparing me to attend a postsecondary area vocational school.
23	Value of my vo-ag courses completed in preparing me to attend a four-year college or university.
24	Value of my high school courses in preparing me to attend a postsecondary area vocational school.
25	Value of my high school courses in preparing me to attend a four-year college or university.
26	Value of my supervised occupational experience program (Supervised farming or agribusiness placement) in preparing me for the occupation I plan to enter.
27	My chances of success as a student if I were to attend a four-year college or university and study animal science.
28	My chances of success as a student if I were to attend a four-year college or university and study plant and soil science.
29	My chances of success as a student if I were to attend a four-year college or university and study agricultural mechanics.
30	My chances of success as a student if I were to attend a four-year college or university and study agricultural management.
31	My chances of success as a student if I were to attend a post-secondary area vocational school and study animal science.
32	My chances of success as a student if I were to attend an area vocational school and study plant and soil science.
33	My chances of success as a student if I were to attend a post-secondary area vocational school and study agricultural mechanics.
34	My chances of success as a student if I were to attend a post-secondary area vocational school and study agricultural management.

Table 85 (Continued)

Matrix variable	Description
35	Animal Science Achievement Test scores.
36	Plant and Soil Science Achievement Test scores.
37	Agricultural Mechanics Achievement Test scores.
38	Agricultural Management Achievement Test scores.

Animal Science Achievement Test scores. This coefficient is significant at the .001 level of probability. It should be pointed out that a lower mean response for this item of the questionnaire indicates higher grades received in vocational agriculture. It may be concluded that a relationship does exist between students' grades received in vocational agriculture and students' Animal Science Achievement Test scores. Students who indicated that they had received higher grades in vocational agriculture courses received higher Animal Science Achievement Test scores.

The correlation analysis revealed a significant ($P<.001$) coefficient of -.39 for the relationship between grades students had received in all courses and students' Animal Science Achievement Test scores. This analysis would indicate that a relationship does exist between students' grades normally received in all courses and scores students received on the Animal Science Achievement Test. Students receiving higher scores on the Animal Science Achievement Test indicated that they received higher grades in all their courses.

The mean responses for years of posthigh school education planned were correlated with the students' Animal Science Achievement Test scores. This analysis revealed a correlation coefficient of .26 which is significant at the .001 level of probability. It may therefore be concluded that a

relationship does exist between the number of years of posthigh school planned by students and students' Animal Science Achievement Test scores. This would indicate that students planning to receive a greater number of years of posthigh school education received higher scores on the Animal Science Achievement Test.

A significant ($P<.001$) correlation coefficient of .13 was observed for the relationship between students' mean ratings for the amount of thought given to their choice of occupation and students' Animal Science Test scores. This analysis would reveal that students who indicated a greater amount of thought regarding their choice of occupation scored higher on the Animal Science Achievement Test.

The correlation analysis for the relationship between students' perception of ability for their occupational choices and students' Animal Science Achievement Test scores revealed a .16 correlation coefficient. This coefficient is significant at the .001 level of probability. Consequently, it may be concluded that students indicating a higher mean rating for their perception of ability for their occupation chosen received higher Animal Science Achievement Test scores.

It was determined that a significant ($P<.05$) correlation coefficient of .07 existed for the relationship between the amount of work experience students had received in the occupation they are planning to enter, and Animal Science Achievement Test scores. Although this relationship is relatively low, it may be concluded that a relationship does exist between these two variables analyzed.

The mean ratings for students' perceptions of the knowledge of the occupation they are planning to enter were correlated with the mean Animal Science Achievement Test scores. This analysis indicated a correlation coefficient of .13 which is significant at the .001 level of probability.

It may thus be concluded that students indicating a higher perception of knowledge of the occupation they are planning to enter received higher test scores.

The correlation analysis for the relationship between students' perception of the value of their high school training for the occupation they are planning to enter and students' Animal Science Achievement Test scores revealed a significant ($P<.001$) correlation coefficient of .18. This analysis would indicate that a relationship does exist between these two varaibles analyzed. Students who indicated a higher rating for the value of their high school training for the occupation they are planning to enter scored higher on the Animal Science Achievement Test.

The mean ratings for the amount of training their high school has provided for the occupation they are planning to enter were correlated with students' Animal Science Achievement Test scores. It was found that a significant ($P<.001$) correlation coefficient of .19 existed for the relationship between these two variables. Students who received higher Animal Science Achievement Test scores indicated a higher amount of training their high school had provided for the occupation they are planning to enter.

It was determined that a significant ($P<.001$) correlation coefficient of .18 existed for the relationship between the amount of encouragement students had received from their father to continue their education beyond high school and students' scores on the Animal Science Achievement Test. Therefore, it may be concluded that a relationship does exist between students' perception of the amount of encouragement they had received from their father to continue their education beyond high school and students' scores on the Animal Science Achievement Test. Students who indicated a higher amount of encouragement received from their father to continue their education beyond high school received higher scores on the Animal Science

Achievement Test.

The analysis of the relationship between the amount of encouragement students had received from their mother to continue their education beyond high school and students' scores on the Animal Science Achievement Test revealed a correlation coefficient of .16. This correlation coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students who indicated a higher amount of encouragement from their mother to continue their education beyond high school received higher scores on the Animal Science Achievement Test.

A significant correlation coefficient of .15 was observed for the relationship between the amount of encouragement students had received from their father to attend an area vocational school and students' scores on the Animal Science Achievement Test. This coefficient is significant at the .05 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students who indicated a higher amount of encouragement received from their father to attend an area vocational school scored higher on the Animal Science Achievement Test.

The correlation analysis for the relationship between the amount of encouragement students had received from their father to attend a four-year college or university and students' scores on the Animal Science Achievement Test revealed a significant ($P<.001$) correlation coefficient of .26. Consequently, it can be concluded that a relationship does exist between students achievement in animal science and the amount of encouragement the students had received from their father to attend a four-year college or university. Students receiving higher scores on the Animal Science

Achievement Test.

It was determined that a correlation coefficient of .27 existed between the amount of encouragement students had received from their mother to attend a four-year college or university and scores received on the Animal Science Achievement Test. This correlation coefficient is significant at the .001 level of probability. Consequently it may be inferred that a relationship does exist between the amount of encouragement students had received from their mother to attend a four-year college or university and students' scores on the Animal Science Achievement Test.

The analysis of the relationship between students' scores on the Animal Science Achievement Test and students' perceptions of the amount of encouragement they had received from their vocational agriculture instructor to attend a postsecondary area vocational school revealed a correlation coefficient of .14. This coefficient is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between the amount of encouragement students had received from their vocational agriculture instructor to attend a postsecondary vocational school and students' scores on the Animal Science Achievement Test. Students indicating a higher amount of encouragement received from their vocational agriculture instructor to attend a postsecondary area vocational school received higher scores on the Animal Science Achievement Test.

A significant correlation coefficient of .24 was calculated for the relationship between the amount of encouragement students had received from their vocational agriculture instructor to attend a four-year college or university and students' scores on the Animal Science Achievement Test. This correlation coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement

received from their vocational agriculture instructor to attend a four-year college or university received higher scores on the Animal Science Achievement Test.

A correlation analysis for students' perceptions of the value of their high school vocational agriculture courses completed in preparing them for the occupation they plan to enter and their achievement in animal science revealed a correlation coefficient of .23. This coefficient is significant at the .001 level of probability. From this analysis it may be concluded that a relationship does exist between students' achievement in animal science and students' perceptions of the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter. Students receiving a higher score on the Animal Science Achievement Test indicated a higher value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter upon completion of their formal education.

The mean ratings for students' perceptions of the value of their FFA program in preparing them for the occupation they are planning to enter were correlated with the mean scores on the Animal Science Achievement Test. This analysis revealed a correlation coefficient of .22 which is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher value of their FFA program in preparing them for the occupation they are planning to enter received higher scores on the Animal Science Achievement Test.

The correlation analysis for the relationship between students' perceptions of the value of their vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school and students' achievement in animal science revealed a correlation coefficient of

.24 which is significant at the .001 level of probability. This coefficient would indicate that a relationship does exist between these two variables analyzed. Students scoring higher on the Animal Science Achievement Test indicated a higher value of their vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school.

The mean ratings for students' perceptions of the value of their vocational agriculture courses completed in preparing them to attend a four-year college or university were correlated with the mean scores on the Animal Science Achievement Test. This analysis revealed a correlation coefficient of .28 which is significant at the .001 level of probability. This analysis would indicate that a relationship does exist between these two variables. Students indicating a higher value of their vocational agriculture courses completed in preparing them to attend a four-year college or university scored higher on the Animal Science Achievement Test.

It was determined that a correlation coefficient of .29 existed for the relationship between students' scores on the Animal Science Achievement Test and students' perceptions of the value of their high school courses completed in preparing them to attend a postsecondary area vocational school. This correlation coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between students' achievement in animal science and students' perceptions of the value of their high school courses completed in preparing them to attend a postsecondary area vocational school. Students receiving a higher score on the Animal Science Achievement Test indicated a higher value of their high school courses completed in preparing them to attend a postsecondary area vocational school.

A correlation coefficient of .25 was calculated for the relationship between students' perceptions of the value of their high school courses completed in preparing them to attend a four-year college or university and scores received on the Animal Science Achievement Test. This correlation is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher value of their high school courses completed in preparing them to attend a four-year college or university received higher scores on the Animal Science Achievement Test.

The analysis of the relationship between students' perceptions of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter and students' achievement in animal science revealed a correlation coefficient of .21. This coefficient is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between students' perception of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter and students' achievement in animal science. Students receiving higher scores in animal science indicated a higher rating of their supervised occupational experience program in preparing them for the occupation they are planning to enter.

A significant correlation coefficient of .34 was calculated for the relationship between students' perceptions of their chances of success as a student attending a four-year college or university and studying animal science, and scores received on the Animal Science Achievement Test. This coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these variables analyzed. Students receiving higher scores on the Animal Science

Achievement Test indicated a higher perception of their chance of success as a student if they attended a four-year college or university and studied animal science.

The correlation analysis for the relationship between students' achievement in animal science and students' perceptions of their chances of success as a student if they attended a four-year college or university and studied plant and soil science revealed a correlation coefficient of .28. This coefficient is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of chances of success as a student if they were to attend a four-year college or a university and study plant and soil science received higher scores on the Animal Science Achievement Test.

The mean ratings for students' perceptions of their chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics were correlated with the mean scores received on the Animal Science Achievement Test. This correlation analysis revealed a coefficient of .14 which is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating of their chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics.

It was determined that a correlation coefficient of .34 existed between students' perceptions of chances of success as a student if they were to attend a four-year college or university and study agricultural management, and students' scores on the Animal Science Achievement Test.

This correlation coefficient is significant at the .001 level of probability. It may be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating for their chances of success as a student if they were to attend a four-year college or university and study agricultural management.

The analysis of the relationship between students' perceptions of their chances of success as a student if they were to attend a postsecondary area vocational school and study animal science, and scores received on the Animal Science Achievement Test revealed a correlation coefficient of .36. This coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating of their chances of success as a student if they were to attend a postsecondary area vocational school and study animal science.

A significant correlation coefficient of .32 was calculated for the relationship between students' achievement in animal science and students' perceptions of their chances of success as a student if they were to attend an area vocational school and study plant and soil science. This correlation coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between students' achievement in animal science and students' perceptions of their chances of success as a student if they were to attend an area vocational school and study plant and soil science. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating of their chances of success as a student if they were to attend an area vocational school and

study plant and soil science.

A correlation analysis revealed a .12 correlation coefficient for the relationship between students' perceptions of chances of success as a student if they attended a postsecondary area vocational school and studied agricultural mechanics, and students' scores on the Animal Science Achievement Test. This correlation coefficient is significant at the .01 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating of their chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural mechanics.

The mean ratings for students' perceptions of chances for success as a student if they were to attend a postsecondary area vocational school and study agricultural management were correlated with the mean scores received on the Animal Science Achievement Test. This analysis revealed a .35 correlation coefficient. This coefficient is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between these two variables. Students receiving higher scores on the Animal Science Achievement Test indicated a higher rating of their chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural management.

Relationship of Personal, Family, and Community Variables to Plant and Soil Science Achievement Test Scores

Students' responses to certain items on the personal, family and community data questionnaire were correlated with students' standard scores on the Plant and Soil Science Achievement Test.

Table 85 summarizes the relationship between personal, family and

community variables, and the Plant and Soil Achievement Test scores. From the information presented in this table, the following observations may be made.

The correlation analysis for the relationship between semesters of vocational agriculture completed, and students' scores on the Plant and Soil Science Achievement Test revealed a correlation coefficient of .13. This correlation is significant at the .001 level of probability. This analysis would indicate that a relationship does exist between the semesters of vocational agriculture completed, and scores received on the Plant and Soil Science Achievement Test. Students completing a greater number of semesters of vocational agriculture scored higher on the Plant and Soil Achievement Test.

The mean responses by students for grades received in vocational agriculture were correlated with scores received from the Plant and Soil Science Achievement Test. This analysis revealed a correlation coefficient of -.35 which is significant at the .001 level of probability. It should be pointed out that a lower mean response for this item of the questionnaire indicates higher grades received in vocational agriculture. Consequently, it can be concluded that a relationship does exist between students' grades received in vocational agriculture and students' Plant and Soil Achievement Test scores. Students indicating a higher grade for vocational agriculture courses completed received higher Plant and Soil Achievement Test scores.

It was determined that a significant correlation coefficient of -.39 existed between grades received by students in all courses, and scores received on the Plant and Soil Science Achievement Test. This correlation coefficient is significant at the .001 level of probability. It should again be pointed out that the lower mean response for this item of the questionnaire

does indicate higher grades received in all courses. It may thus be concluded that a relationship does exist between students' grades received in all courses, and scores received by students on the Plant and Soil Science Achievement Test. Students indicating that they had received higher grades in all courses scored higher on the Plant and Soil Science Achievement Test.

The analysis for the relationship between students' responses to years of posthigh school education planned and students' scores on the Plant and Soil Science Achievement Test revealed a correlation coefficient of .28. This correlation coefficient is significant at the .001 level of probability. From this analysis one may conclude that a relationship does exist between the number of years of posthigh school education planned by the students, and their achievement in plant and soil science.

The mean ratings for students' perceptions of their ability for the occupation they are planning to enter were correlated with scores received from the Plant and Soil Science Achievement Test. This analysis revealed a .07 correlation coefficient which is significant at the .05 level of probability. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of their ability for the occupation they are planning to enter received higher scores on the Plant and Soil Science Achievement Test.

The analysis of the relationship between students' perceptions of their knowledge of the occupation they are planning to enter, and students' achievement in plant and soil science revealed a correlation coefficient of .08. This correlation coefficient is significant at the .05 level of probability. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of knowledge of the occupation they are planning to enter.

A significant correlation coefficient of .19 was calculated for the relationship between students' perceptions of the value of their high school training for the occupation they are planning to enter, and their scores received on the Plant and Soil Science Achievement Test. This coefficient is significant at the .001 level of probability. It may thus be concluded that a relationship does exist between students' achievement in plant and soil science, and students' perceptions of their value of their high school training for the occupation they are planning to enter. Students indicating a higher perception of the value of their high school training for the occupation they are planning to enter received higher scores on the Plant and Soil Science Achievement Test.

A correlation analysis for the relationship between students perceptions of the amount of training their high school has provided for the occupation they are planning to enter, and students' scores on the Plant and Soil Science Achievement Test revealed a correlation coefficient of .21. This coefficient is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between students' achievement in plant and soil science, and students' perceptions of the amount of training their high school has provided for the occupation they are planning to enter. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher rating for the amount of training their high school has provided for the occupation they are planning to enter.

The mean ratings for students' perceptions of the amount of encouragement they had received from their father to continue their education beyond high school were correlated with students' scores received on the Plant and Soil Science Achievement Test. This analysis revealed a correlation

coefficient of .15 which is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement they had received from their father to continue their education beyond high school received higher scores on the Plant and Soil Science Achievement Test.

It was determined that a correlation coefficient of .14 existed between students' perceptions of the amount of encouragement received from their mother to continue their education beyond high school, and students' scores on the Plant and Soil Science Achievement Test. This correlation is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their mother to continue their education beyond high school received higher scores on the Plant and Soil Science Achievement Test.

A significant correlation coefficient of .23 was observed for the relationship between the amount of encouragement students had received from their father to attend a four-year college or university, and students' scores on the Plant and Soil Science Achievement Test. It may therefore be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their father to attend a four-year college or university received higher scores on the Plant and Soil Science Achievement Test.

The correlation analysis for the amount of encouragement students had received from their mother to attend a postsecondary area vocational school revealed a correlation coefficient of .07. Although this coefficient is low, it is significant at the .05 level of probability. Therefore, it may

be concluded that students indicating a higher amount of encouragement received from their mother to attend a postsecondary area vocational school received higher scores on the Plant and Soil Science Achievement Test.

The mean ratings for the amount of encouragement students had received from their mother to attend a four-year college or university were correlated with scores received on the Plant and Soil Science Achievement Test. This correlation analysis revealed a correlation coefficient of .27 which is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between students' achievement in plant and soil science, and the amount of encouragement students had received from their mother to attend a four-year college or university. Students indicating a higher amount of encouragement received from their mother to attend a four-year college or university received higher scores on their Plant and Soil Science Achievement Test.

It was determined that a correlation coefficient of .11 existed for the relationship between the amount of encouragement students had received from their vo-ag instructor to attend a postsecondary area vocational school, and scores on the Plant and Soil Science Achievement Test. This correlation coefficient is significant at the .01 level of probability. Thus, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement from their vo-ag instructor to attend a postsecondary area vocational school received higher scores on the Plant and Soil Science Achievement Test.

The analysis of the relationship between the amount of encouragement students had received from their vocational agriculture instructor to attend a four-year college or university, and students' achievement in plant and soil science revealed a correlation coefficient of .23. This correlation

is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between the amount of encouragement students had received from their vocational agriculture instructor to attend a four-year college or university and students' achievement in plant and soil science. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher amount of encouragement they had received from their vo-ag instructor to attend a four-year college or university.

A significant correlation coefficient of .17 was determined for the relationship between students' achievement in plant and soil science, and students' perceptions of the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter. This correlation coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter received higher scores on the Plant and Soil Science Achievement Test.

The correlation analysis for the relationship between students' achievement in plant and soil science, and students' perceptions of the value of their FFA program in preparing them for the occupation they are planning to enter revealed a correlation coefficient of .18. This coefficient is significant at the .001 level of probability. It may therefore be concluded that students indicating a higher perception of the value of their FFA program in preparing them for the occupation they are planning to enter received higher scores on the Plant and Soil Science Achievement Test.

The mean ratings for students' perceptions of the value of their vo-ag

courses completed in preparing them to attend a postsecondary area vocational school were correlated with students' scores on the Plant and Soil Science Achievement Test. This correlation analysis revealed a .23 coefficient which is significant at the .001 level of probability. Therefore, it may be concluded that students indicating a higher perception of the value of their vo-ag courses completed in preparing them to attend a postsecondary area vocational school received higher scores on the Plant and Soil Science Achievement Test.

It was determined that a significant ($P<.001$) correlation coefficient of .27 existed for the relationship between students' achievement in plant and soil science, and students' perceptions of the value of their vo-ag courses completed in preparing them to attend a four-year college or university. It may thus be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of the value of their vo-ag courses completed in preparing them to attend a four-year college or university. The analysis of the relationship between students' achievement in plant and soil science and students' perceptions of the value of their high school courses completed in preparing them to attend a post-secondary area vocational school revealed a correlation coefficient of .28. This coefficient is significant at the .001 level of probability. Consequently it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their high school courses completed in preparing them to attend a post-secondary area vocational school received higher scores on the Plant and Soil Science Achievement Test.

A significant correlation coefficient of .25 was calculated for the

relationship between students' scores on the Plant and Soil Science Achievement Test, and students' perceptions of the value of their high school courses in preparing them to attend a four-year college or university. It may be concluded that students indicating a higher perception of the value of their high school courses completed in preparing them to attend a four-year college or university received higher scores on the Plant and Soil Science Achievement Test.

The correlation analysis for the relationship between students' achievement in plant and soil science, and students' perceptions of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter revealed a significant correlation coefficient of .17. This coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter.

The mean ratings for students' perceptions of chances of success as a student if they were to attend a four-year college or university and study animal science were correlated with students' scores on the Plant and Soil Science Achievement Test. This correlation analysis revealed a coefficient of .36 which is significant at the .001 level of probability. It may therefore be concluded that students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of their chances for success as a student if they were to attend a four-year college or university and study animal science.

It was determined that significant correlation coefficient of .38

existed for the relationship between students' achievement in plant and soil science and students' perceptions of chances of success as a student if they were to attend a four-year college or university and study plant and soil science. This correlation coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher chance of success if they were to attend a four-year college or university and study Plant and Soil Science.

The analysis for the relationship between students' achievement in plant and soil science, and students' perceptions of their chances for success as a student if they were to attend a four-year college or university and study agricultural mechanics revealed a correlation coefficient of .21. This coefficient is significant at the .001 level of probability. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of chances for success as a student if they were to attend a four-year college or university and study agricultural mechanics received higher scores on the Plant and Soil Science Achievement Test.

A significant ($P<.001$) correlation coefficient of .39 was calculated for the relationship between students' achievement in plant and soil science, and students' perceptions of chances for success as a student if they were to attend a four-year college or university and study agricultural management. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of chances for success as a student if they were to attend a four-year college or university and study agricultural management received higher scores on

the Plant and Soil Science Achievement Test.

The correlation analysis for the relationship between students' achievement in plant and soil science, and students' perceptions of their chances for success as a student if they were to attend a postsecondary area vocational school and study animal science revealed a correlation coefficient of .41. This coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of chances for success as a student if they were to attend a postsecondary area vocational school and study animal science.

The mean ratings for students' perceptions of chances for success as a student if attending a postsecondary area vocational school and studying plant and soil science were correlated with students' scores on the Plant and Soil Science Achievement Test. This correlation analysis revealed a significant ($P<.001$) correlation coefficient of .38. It may be concluded that students receiving higher scores on the Plant and Soil Science Achievement Test indicated a higher perception of their chances for success as a student if they were to attend a postsecondary area vocational school and study plant and soil science.

It was determined that a significant ($P<.001$) correlation coefficient of .17 existed for the relationship between students' scores on the Plant and Soil Science Achievement Test, and students' ratings for their chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural mechanics. Students indicating a higher perception of chances for success as a student attending a postsecondary area vocational school and studying agricultural mechanics received higher scores on the Plant and Soil Science Achievement Test.

The analysis for the relationship between students' achievement in

plant and soil science, and students' perceptions of their chances for success if they were attending a postsecondary area vocational school and studying agricultural management revealed a correlation coefficient of .39. This correlation coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables. Students indicating a higher chance of success as a student attending a postsecondary area vocational school and studying agricultural management received higher scores on the Plant and Soil Science Achievement Test.

Relationship of Personal, Family, and Community Variables to Agricultural Mechanics Achievement Test Scores

Students' responses to selected items on the personal, family, and community data questionnaire were correlated with students' standard scores on the Agricultural Mechanics Achievement Test.

The relationship between personal, family, and community variables and the Agricultural Mechanics Achievement Test scores are summarized in Table 85. From the information presented in this table, the following observations may be made.

The correlation analysis for the relationship between the semesters of vocational agriculture completed and students' scores on the Ag. cultural Mechanics Achievement Test revealed a correlation coefficient of .08. This correlation coefficient is significant at the .05 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. This relationship indicates that students who completed a greater number of semesters of vocational agriculture had higher Agricultural Mechanics Achievement Test scores.

The mean ratings for the relationship between grades received in

vocational agriculture, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of -.24. This coefficient is significant at the .001 level of probability. It should be remembered that a lower mean response for this item of the questionnaire indicates higher grades received in vocational agriculture. It may thus be concluded that a relationship does exist between students' grades received in vocational agriculture and students' scores on the Agricultural Mechanics Achievement Test. Students who indicated a higher grade for vocational courses received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between students' grades received in all courses and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of -.27 which is significant at the .001 level of probability. This analysis would indicate that a relationship does exist between students' grades received in all courses, and achievement in agricultural mechanics. Students indicating that they had received higher grades in all courses received higher scores on the Agricultural Mechanics Achievement Test.

A significant correlation coefficient of .13 was observed for the relationship between years of posthigh school education students had planned, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .001 level of probability. Therefore, it may be concluded that a relationship does exist between the number of years of posthigh school education planned and scores received by students on the Agricultural Mechanics Achievement Test. Students indicating a higher number of years of posthigh school education planned received higher scores on the Agricultural Mechanics Achievement Test.

The correlation analysis for the relationship between students' perceptions of their ability for the occupation they have chosen, and students' scores on the Agricultural Mechanics Achievement Test indicated a correlation coefficient of .10. This coefficient is significant at the .01 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of ability for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The mean ratings by students for the amount of work experience they had received in the occupation they are planning to enter were correlated with Agricultural Mechanics Achievement Test scores. This correlation analysis revealed a correlation coefficient of .10 which is significant at the .01 level of probability. It may thus be concluded that a relationship does exist between these two variables. Students indicating a higher amount of work experience for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .11 existed for the relationship between students' perceptions of their knowledge of the occupation they are planning to enter, and scores received on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .01 level of probability. It may thus be concluded that a relationship does exist between students' perceptions of their knowledge of the occupation they are planning to enter and students' scores on the Agricultural Mechanics Achievement Test. Students indicating a higher perception of knowledge of the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between students' perceptions of the

value of their high school training for the occupation they are planning to enter, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .09. This coefficient is significant at the .01 level of probability. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their high school training for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The correlation analysis for the relationship between students' perceptions of the amount of training their high school has provided for the occupation they are planning to enter, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .08. This correlation coefficient is significant at the .05 level of probability. Although this correlation coefficient is small, it may be concluded that a relationship does exist between these two variables. Students indicating a higher perception of the amount of training their high school has provided for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The mean ratings by students for the amount of encouragement they had received from their father to continue their education beyond high school, were correlated with scores received on the Agricultural Mechanics Achievement Test. This correlation analysis revealed a coefficient of .10 which is significant at the .01 level of probability. Therefore, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement received from their father to continue their education beyond high school received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .10 existed for the relationship between students' perceptions of the amount of encouragement they had received from their mother to continue their education beyond high school, and students scores received on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .01 level of probability. It may thus be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement from their mother to continue their education beyond high school received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between the amount of encouragement students had received from their father to attend a postsecondary area vocational school, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .07. This coefficient is significant at the .05 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their father to attend an area vocational school received higher scores on the Agricultural Mechanics Achievement Test.

A significant ($P<.01$) correlation coefficient of .11 was observed for the relationship between the amount of encouragement students had received from their father to attend a four-year college or university, and students' scores on the Agricultural Mechanics Achievement Test. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement received from their father to attend a four-year college or university received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between the amount of encouragement students had received from their mother to attend a four-year college or university and students' scores on the Agricultural Mechanics Achievement Test indicated a .14 correlation coefficient. This coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their mother to attend a four-year college or university received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .10 existed for the relationship between the amount of encouragement students had received from their vocational agriculture instructor to attend a postsecondary area vocational school, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .01 level of probability. It may thus be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their vocational agriculture instructor to attend a postsecondary area vocational school received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .17 existed for the relationship between the amount of encouragement students had received from their vocational agriculture instructor to attend a four-year college or university, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .001 level of probability. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher amount of encouragement received from their vocational agriculture instructor to

attend a four-year college or university received higher scores on the Agricultural Mechanics Achievement Test.

The mean ratings for students' perceptions of the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter were correlated with students' scores on the Agricultural Mechanics Achievement Test. This correlation analysis revealed a significant ($P<.001$) correlation coefficient of .17. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their high school vocational agriculture courses in preparing them for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The correlation analysis for the relationship between students' perceptions of the value of their FFA program in preparing them for the occupation they are planning to enter, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .07. This coefficient is significant at the .01 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables. Students indicating a higher perception of the value of their FFA program in preparing them for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

The mean ratings for students' perceptions of the value of their vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school were correlated with students' scores on the Agricultural Mechanics Achievement Test. This correlation analysis revealed a correlation coefficient of .12 which is significant at the .001

level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their vocational agriculture courses completed in preparing them to attend a postsecondary area vocational school scored higher on the Agricultural Mechanics Achievement Test.

It was determined that a significant ($P<.001$) correlation coefficient of .13 existed for the relationship between students' perceptions of the value of their vocational agriculture courses completed in preparing them to attend a four-year college or university, and students' scores on the Agricultural Mechanics Achievement Test. It may therefore be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their vocational agriculture courses in preparing them to attend a four-year college or university received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between students' perceptions of the value of their high school courses completed in preparing them to attend a postsecondary area vocational school, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .19. This correlation coefficient is significant at the .001 level of probability. From this relationship, it may be concluded that students indicating a higher perception of the value of their high school courses completed in preparing them to attend a postsecondary area vocational school received higher scores on the Agricultural Mechanics Achievement Test.

A significant ($P<.001$) correlation coefficient of .12 was observed for the relationship between students' perceptions of the value of their

high school courses completed in preparing them to attend a four-year college or university, and students' scores on the Agricultural Mechanics Achievement Test. It may thus be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of the value of their high school courses completed in preparing them to attend a four-year college or university received higher scores on the Agricultural Mechanics Achievement Test.

A correlation coefficient of .10 was observed for the relationship between students' perceptions of the value of their occupational experience program in preparing for the occupation they are planning to enter, and students' scores on the Agricultural Mechanics Achievement Test. This coefficient is significant at the .01 level of probability. From this analysis, it may be concluded that a relationship does exist between these two variables. Students indicating a higher value of their occupational experience program in preparing them for the occupation they are planning to enter received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .22 existed for the relationship between students' perceptions of their chances of success as a student if they were to attend a four-year college or university and study animal science, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .001 level of probability. It may thus be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of their chances of success as a student if they were to attend a four-year college or university and study animal science, received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between students' perceptions of their chances of success as a student if they were to attend a four-year college or university and study plant and soil science, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .23. This coefficient is significant at the .001 level of probability. Thus, it may be concluded that a relationship does exist between these two variables. Students indicating a higher perception of their chances of success as a student if they were to attend a four-year college or university and study plant and soil science, received higher scores on the Agricultural Mechanics Achievement Test.

A significant ($P<.001$) correlation coefficient of .24 was observed for the relationship between students' perceptions of their chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics, and students' scores on the Agricultural Mechanics Achievement Test. Consequently, it may be concluded that a relationship does exist between these two variables. Students indicating a higher perception of their chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics, received higher scores on the Agricultural Mechanics Achievement Test.

The correlation analysis for the relationship between students' perceptions of their chances of success as a student if they were to attend a four-year college or university and study agricultural management, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation coefficient of .24. This correlation coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables. Students indicating

a higher perception of their chances of success as a student if they were to attend a four-year college or university and study agricultural management, received higher scores on the Agricultural Mechanics Achievement Test.

The mean ratings for students' perceptions of their chances for success as a student if they were to attend a postsecondary area vocational school and study animal science were correlated with students' scores on the Agricultural Mechanics Achievement Test. This correlation analysis revealed a coefficient of .23 which is significant at the .001 level of probability. This relationship would indicate that students indicating a higher perception of chances of success as a student if they were to attend a postsecondary area vocational school and study animal science, received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .23 existed for the relationship between students' perceptions of chances of success as a student if they were to attend an area vocational school and study plant and soil science, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .001 level of probability. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of chances of success as a student if they were to attend an area vocational school and study plant and soil science, received higher scores on the Agricultural Mechanics Achievement Test.

The analysis of the relationship between students' perceptions of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural mechanics, and students' scores on the Agricultural Mechanics Achievement Test revealed a correlation

coefficient of .24. This coefficient is significant at the .001 level of probability. It may therefore be concluded that a relationship does exist between these two variables. Students indicating a higher perception of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural mechanics, received higher scores on the Agricultural Mechanics Achievement Test.

It was determined that a correlation coefficient of .27 existed for the relationship between students' perceptions of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural management, and students' scores on the Agricultural Mechanics Achievement Test. This correlation coefficient is significant at the .001 level of probability, and it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural management, received higher scores on the Agricultural Mechanics Achievement Test.

Relationship of Personal, Family, and Community Variables to Agricultural Management Achievement Test Scores

Students' responses to selected items on the personal, family, and community data questionnaire were correlated with students' standard scores of the Agricultural Management Achievement Test. The relationship between personal, family, and community variables and the Agricultural Management Achievement Test scores are summarized in Table 85. From the information presented in this table, the following observations may be made.

The mean semesters of vocational agriculture completed were correlated with students' scores on the Agricultural Management Achievement

Test. This correlation analysis revealed a significant ($P<.01$) correlation coefficient of .11. From this analysis it may be concluded that a relationship does exist between semesters of vocational agriculture completed and students' scores on the Agricultural Management Achievement Test. Students receiving higher scores on the Agricultural Management Achievement Test indicated they had completed a greater number of semesters of vocational agriculture.

It was determined that a -.32 correlation coefficient existed for the relationship between students' grades received in vocational agriculture, and students' scores on the Agricultural Management Achievement Test. This correlation coefficient is significant at the .001 level of probability. It should be pointed out that for this item on the questionnaire a lower response number indicates higher grades received in vocational agriculture. It may be concluded that a relationship does exist between grades received in vocational agriculture and scores received on the Agricultural Management Achievement Test. Students receiving higher scores on the Agricultural Management Achievement Test indicated that they received higher grades in vocational agriculture.

The analysis of the relationship between students' grades received in all courses, and scores received on the Agricultural Management Achievement Test revealed a correlation coefficient of -.36. This correlation coefficient is significant at the .001 level of probability. From this analysis it may be concluded that a relationship does exist between grades received in all courses, and scores on the Agricultural Management Achievement Test. Students receiving higher scores on the Agricultural Management Achievement Test indicated that they had received higher grades in all courses they had completed.

A significant ($P<.001$) correlation coefficient of .23 was observed for the relationship between years of posthigh school education planned by students and students' scores on the Agricultural Management Achievement Test. It may be concluded that a relationship does exist between these two variables analyzed. Students indicating a greater number of years of post-high school education planned received higher scores on the Agricultural Management Achievement Test.

The correlation analysis for the relationship between students' perceptions of their ability for the occupation they are planning to enter, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .09. This correlation coefficient is significant at the .01 level of probability. Thus, it may be concluded that a relationship does exist between these two variables analyzed Students indicating a higher perception of ability for the occupation they are planning to enter received higher scores on the Agricultural Management Achievement Test.

The mean ratings for the relationship between students' perceptions of their knowledge for the occupation they are planning to enter, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .08. This coefficient is significant at the .05 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables analyzed. Students indicating a higher perception of knowledge of the occupation they are planning to enter received higher scores on the Agricultural Management Achievement Test.

The correlation analysis for the relationship between students' perceptions regarding the amount of training their high school has provided

for the occupation they are planning to enter, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .22. This coefficient is significant at the .001 level of probability. This would indicate a relationship between these two variables analyzed. Students indicating a higher rating for the amount of training their high school has provided for the occupation they are planning to enter received higher scores on the Agricultural Management Achievement Test.

The mean ratings for the relationship between students' perceptions of the amount of encouragement received from their father to continue their education beyond high school, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .16. This coefficient is significant at the .001 level of probability. Consequently, it may be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their father to continue their education beyond high school received higher scores on the Agricultural Management Achievement Test.

It was determined that a correlation coefficient of .15 existed for the relationship between students' perceptions of the amount of encouragement they had received from their mother to continue their education beyond high school, and scores received on the Agricultural Management Achievement Test. This correlation coefficient is significant at the .001 level of probability. This correlation analysis would indicate that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their mother to continue their education beyond high school received higher grades on the Agricultural Management Achievement Test.

The analysis of the relationship between students' perception of the

amount of encouragement received from their father to attend an area vocational school, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .09. This coefficient is significant at the .01 level of probability. Thus, it may be concluded that a relationship does exist between these two variables. Students indicating a higher amount of encouragement received from their father to attend an area vocational school received higher scores on the Agricultural Management Achievement Test.

A significant ($P<.001$) correlation coefficient of .23 was observed for the relationship between the amount of encouragement students had received from their father to attend a four-year college or university, and students' scores on the Agricultural Management Achievement Test. This relationship would suggest that students receiving a higher amount of encouragement from their father to attend a four-year college or university received higher scores on the Agricultural Management Achievement Test.

The correlation analysis for the relationship between the amount of encouragement students had received from their mother to attend a po. secondary area vocational school, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .12. This coefficient is significant at the .01 level of probability. This relationship would suggest that students indicating a higher amount of encouragement received from their mother to attend a postsecondary area vocational school received higher scores on the Agricultural Management Achievement Test.

The mean ratings for the relationship between students' perceptions of the amount of encouragement received from their mother to attend a four-year college or university and students' scores on the Agricultural

Management Achievement Test revealed a correlation coefficient of .26. This coefficient is significant at the .001 level of probability. From this relationship it may be concluded that students indicating a higher amount of encouragement received from their mother to attend a four-year college or university, received higher scores on the Agricultural Management Achievement Test.

It was determined that a correlation coefficient of .19 existed for the relationship between students' perceptions of the amount of encouragement received from their vo-ag instructor to attend a postsecondary area vocational school, and students' scores on the Agricultural Management Achievement Test. This correlation coefficient is significant at the .001 level of probability. This relationship would suggest that students indicating a higher amount of encouragement received from their vo-ag instructor to attend a postsecondary area vocational school, received higher scores on the Agricultural Management Achievement Test.

The analysis of the relationship between students' perceptions of the amount of encouragement received from their vo-ag instructor to attend a four-year college or university and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .28. This coefficient is significant at the .001 level of probability. Therefore, this relationship would suggest that students indicating a higher amount of encouragement received from their vo-ag instructor to attend a four-year college or university received higher scores on the Agricultural Management Achievement Test.

A significant ($P<.001$) correlation coefficient of .23 was observed for the relationship between students' perceptions of the value of their high school vo-ag courses completed in preparing them for the occupation

they are planning to enter, and students' scores on the Agricultural Management Achievement Test. This relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test, indicated a higher perception of the value of their high school vo-ag courses completed in preparing them for the occupation they are planning to enter.

The correlation analysis for the relationship between students' perceptions of the value of the FFA program in preparing them for the occupation they are planning to enter and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .19. This correlation coefficient is significant at the .001 level of probability. The relationship between these two variables would suggest that students indicating a higher value of the FFA program in preparing them for the occupation they are planning to enter, received higher scores on the Agricultural Management Achievement Test.

The mean ratings for the relationship between students' perceptions of the value of their vo-ag courses completed in preparing them to attend a postsecondary area vocational school and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .22. This correlation coefficient is significant at the .001 level of probability. From the relationship between these variables, it may be concluded that students indicating a higher perception of the value of their vo-ag courses completed in preparing them to attend a postsecondary area vocational school received higher scores on the Agricultural Management Achievement Test.

It was determined that a significant ($P<.001$) correlation coefficient of .27 existed for the relationship between students' perceptions of the

value of their vo-ag courses completed in preparing them to attend a four-year college or university, and their scores received on the Agricultural Management Achievement Test. This relationship would suggest that students indicating a higher perception of the value of their vo-ag courses completed in preparing them to attend a four-year college or university, received higher scores on the Agricultural Management Achievement Test.

The analysis of the relationship between students' perceptions of the value of their high school courses in preparing them to attend a postsecondary area vocational school, and their scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .31. This coefficient is significant at the .001 level of probability. The relationship between these two variables would indicate that students receiving higher scores on the Agricultural Management Achievement Test rated a higher value of their high school courses completed in preparing them to attend a post-secondary area vocational school.

A significant ($P<.001$) correlation coefficient of .26 was observed for the relationship between students' perceptions of the value of their high school courses completed in preparing them to attend a four-year college or university, and students' scores on the Agricultural Management Achievement Test. This significant relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher value of their high school courses completed in preparing them to attend a four-year college or university.

The correlation analysis for the relationship between students' perceptions of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter, and students' scores on the Agricultural Management Achievement Test revealed a

correlation coefficient of .25. This coefficient is significant at the .001 level of probability. From this relationship it may be concluded that students indicating a higher value of their supervised occupational experience program in preparing them for the occupation they are planning to enter, received higher scores on the Agricultural Management Achievement Test.

The mean ratings for students' perceptions of chances for success as a student if attended a four-year college or university and studied animal science, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .36. This correlation coefficient is significant at the .001 level of probability. From this relationship it may be concluded that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher perception of chances of success as a student if they attended a four-year college or university and studied animal science.

It was determined that a significant ($P<.001$) correlation coefficient of .35 existed for the relationship between students' perceptions of chances for success as a student if they were to attend a four-year college or university and study plant and soil science, and students' scores on the Agricultural Management Achievement Test. This significant relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher chance of success as a student if they were to attend a four-year college or university and study plant and soil science.

The analysis of the relationship between students' perceptions of chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics, and students' scores on

the Agricultural Management Achievement Test indicated a correlation coefficient of .17. This coefficient is significant at the .001 level of probability. From this relationship it can be concluded that students receiving higher scores on the Agricultural Management Achievement Test, indicated higher chances of success as a student if they were to attend a four-year college or university and study agricultural mechanics.

A significant ($P<.001$) correlation coefficient of .38 was observed for the relationship between students' perceptions of chances for success as a student if they were to attend a four-year college or university and study agricultural management and students' scores on the Agricultural Management Achievement Test. This relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher perception of chances for success as a student if they were to attend a four-year college or university and study agricultural management.

A significant ($P<.001$) correlation coefficient of .37 was observed for the relationship between students' perceptions of chances of success as a student if they were to attend a postsecondary area vocational school and study animal science, and students' scores on the Agricultural Management Achievement Test. This significant relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher perception of chances of success as a student if they were to attend a postsecondary area vocational school and study animal science.

The correlation analysis for the relationship between students' perceptions for chances of success as a student if they were to attend an area vocational school and study plant and soil science, and students' scores

on the Agricultural Management Test revealed a correlation coefficient of .36. This coefficient is significant at the .001 level of probability. This relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher perception of chances of success as a student if they were to attend an area vocational school and study plant and soil science.

The mean ratings for the relationship between students' perceptions of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural mechanics, and students' scores on the Agricultural Management Achievement Test revealed a correlation coefficient of .14. This correlation is significant at a .001 level of probability. From this relationship it may be concluded that students indicating a higher perception of chances of success if they were to attend a postsecondary area vocational school and study agricultural mechanics, received higher scores on the Agricultural Management Achievement Test.

It was determined that a significant ($P<.001$) correlation coefficient of .37 existed for the relationship between students' perceptions of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural management, and students' scores on the Agricultural Management Achievement Test. This relationship would indicate that students receiving higher scores on the Agricultural Management Achievement Test indicated a higher perception of chances of success as a student if they were to attend a postsecondary area vocational school and study agricultural management.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research study was to determine the educational plans of junior and senior vocational agriculture students and assess differences in factors related to their educational plans upon graduation from high school.

The population for this study consisted of all junior and senior students enrolled in secondary vocational agriculture programs in Iowa. Data were collected from junior and senior students in a sample of 30 high schools which provided vocational agriculture programs during the 1974-75 school year. A total of 623 students participated in the study.

In completing the instruments, each student was expected to state his/her educational plans upon graduation from high school. Based upon the students' educational plans, the following groups were identified and studied.

Group 1 - Vocational agriculture students who plan to attend a post-secondary area vocational school upon graduation from high school.

Group 2 - Vocational agriculture students who plan to attend a four-year college or university upon graduation from high school.

Group 3 - Vocational agriculture students who plan to enter the world of work upon graduation from high school.

The instruments used in collecting the data for this study are as follows:

A. Personal, Family, and Community Data Related to Educational and Occupational Plans of Iowa Vocational Agriculture Students. This instrument was developed to assess the personal, family, and community variables related to the educational plans of high school vocational agriculture students.

B. Agribusiness Achievement Test. This instrument, developed by Peterson, et al. was selected to assess vocational agriculture students' achievement in the following areas of agriculture:

1. Animal Science.
2. Plant and Soil Science.
3. Management.
4. Mechanics.

The data for this study were collected by administering these instruments to participants during December, 1974 and January, 1975. Data from the instruments were tabulated, scored, and transferred to IBM cards. The Agribusiness Achievement Tests were hand scored by the research project staff using scoring keys provided by the publisher of the tests. The raw scores were transformed to standard scores.

Data from the instruments were analyzed utilizing computer facilities at the Computation Center, Iowa State University, Ames, Iowa. The statistics used in analyzing the data included chi-square, three-way analysis of variance, and Pearson product-moment correlation.

Summary of Findings

This research study was a descriptive investigation of possible differences in selected factors related to the educational plans among high school vocational agriculture students grouped by their educational plans upon graduation from high school.

The findings of the study are as follows:

1. Approximately 27 percent of the junior and senior vocational agriculture students participating in this study indicated that they planned to attend a postsecondary area vocational school upon graduation from high school. About 17 percent of the 623 junior and senior vocational agriculture students participating in this study indicated that they planned to attend a four-year college

or university upon graduation from high school. Over one-half (55.9 percent) of these students sampled indicated that they planned to get a full-time job or work for themselves and not attend college upon graduation from high school.

2. A chi-square analysis revealed that no significant relationship exists between students' grade levels and students' educational plans upon graduation from high school when these plans are categorized as: students who planned to attend a postsecondary area vocational school, students who planned to attend a four-year college or university, and students who planned to enter the world of work.

3. The analysis of variance for students' responses to the semesters of vocational agriculture they had completed grouped according to their educational plans resulted in an F ratio of 1.79 which is not significant at the .05 level of probability. A significant ($P<.01$) F ratio was observed for grade level and for schools in analyzing this variable.

4. Results of the three-way analysis of variance for students' responses to grades received in vocational agriculture grouped by their educational plans resulted in an F ratio of 47.41 which is significant at the .01 level of probability with 2 and 558 degrees of freedom. A significant ($P<.01$) F ratio of 7.18 was also observed for grade level of students. Using the Scheffé method of multiple comparison of all group means revealed that a mean response of 4.36 for Group 1 is significantly ($P<.01$) greater than the mean response of 3.09 for Group 2. A mean response of 4.94 for Group 3 is significantly ($P<.01$) greater than the mean

responses of 4.36 and 3.09 for Groups 1 and 2 respectively.

5. A three-way analysis of variance for students' responses to grades received in all courses revealed an F ratio of 3.42 for differences among schools. This F ratio is significant at the .01 level of probability. An analysis of the mean responses to this variable by students grouped according to their educational plans revealed an F ratio of 64.63. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. Using the Scheffé method of multiple comparison, it was found that the mean response of 4.99 for Group 1 is significantly ($P<.01$) greater than the mean response of 3.74 for Group 3. The mean response of 5.56 for Group 3 is significantly (P .01) greater than the responses of 4.99 and 3.74 for Groups 1 and 2 respectively.
6. A significant ($P<.001$) chi-square value of 30.80 was observed for the relationship between students' participation in athletics and students' educational plans. Over 72 percent of those students who planned to attend a four-year college or university indicated they had participated in high school atheltics. Whereas, approximately 49 percent of those who planned to attend a postsecondary area vocational school and 41.7 percent of those who planned to enter the world of work indicated they participated in athletics.
7. A chi-square analysis revealed a significant ($P<.001$) chi-square value of 34.65 for the relationship between students' participation in band and students' educational plans. About 32 percent of the students in Group 2 indicated they participated in band. However, only 13.8 percent and 8.9 percent of Groups 1 and 3 respectively indicated that they participated in band.

8. A significant ($P<.001$) chi-square value of 21.53 was observed for the relationship between students' participation in chorus and students' educational plans upon graduation from high school. A greater number (24.1 percent) of students in Group 2 indicated they participated in chorus compared to 15.6 percent for Group 1 and 7.8 percent for Group 3.
9. A chi-square analysis revealed no significant relationship between students' participation in FFA and students' educational plans upon graduation from high school. However, it should be pointed out that 84.3 percent of the students participating in this research study indicated that they were a member of the FFA.
10. A significant ($P<.001$) chi-square value of 30.62 was calculated for the relationship between students' participation in 4-H Club and students' educational plans upon graduation from high school. A total of 47.2 percent of the students in Group 2 indicated that they had participated in 4-H Club. Whereas, 31.1 percent of Group 1 and 20.4 percent of Group 3 indicated they had participated in the 4-H Club.
11. A chi-square analysis revealed a significant relationship between students' participation in hobby clubs and student government, and students' educational plans.
12. Over 81 percent of the students participating in this study indicated that they were living on a farm. A chi-square analysis revealed no significant relationship between students' place of residence and students' educational plans upon graduation from high school.
13. A three-way analysis of variance for students' responses to number

of years of posthigh school education planned grouped by their educational plans upon graduation from high school revealed a significant ($P<.01$) F ratio of 740.79. A multiple comparison revealed a mean response of 5.12 for Group 2 is significantly ($P<.01$) greater than mean responses of 2.68 and 1.15 for Groups 1 and 3 respectively. A mean response of 2.68 for Group 1 is significantly ($P<.01$) greater than the mean response of 1.15 for Group 3. This difference would be expected since students in Group 3 indicated that they planned to get a full-time job or work for themselves upon graduation from high school.

14. The majority (51.6 percent) of the students sampled in this study indicated that they sometimes work outside their family and home or farm. Over 29 percent of the students in the three groups indicated that they had a fairly regular job outside their family and home or farm. Whereas, 19 percent of the students sampled indicated that they did not work outside the family and home or farm. A chi-square analysis revealed a significant relationship between the extent students were working outside their family and home or farm, and students' educational plans. A chi-square value of 13.64 was observed for this analysis which is significant at the .01 level of probability.

15. The majority (47 percent) of the students in all three student groups indicated that their father had the most influence on their choice of occupation. A greater percentage (52.6 percent) of the students who planned to get a job upon completion of high school indicated their father had the most influence on their choice of occupation. This is in comparison to 42.9 percent

for Group 1 and 34.4 percent for Group 2. A significant ($P<.001$) chi-square value of 44.69 was observed for the relationship between students' response to "significant others" influencing their occupational choice, and their educational plans upon graduation from high school.

16. Students grouped by grade level differed significantly in their response to the amount of certainty regarding their occupational choice. An F ratio of 4.33 which is significant at the .05 level of probability was observed for the ratings of this statement grouped by student grade level. A significant ($P<.05$) F ratio of 3.17 was observed for students' responses for the amount of certainty regarding their occupational choice grouped according to their educational plans. A multiple comparison revealed that a mean rating of 7.10 for Group 3 is significantly ($P<.05$) greater than the mean rating of 6.35 for Group 2. No other significant differences were observed.

17. The analysis of variance for students' ratings in regard to the amount of thought they had given to their occupational choice grouped by grade level revealed a F ratio of 14.15. This ratio when tested at the .01 level of probability with 2 and 558 degrees of freedom is significant. No significant differences were observed for students' ratings of this variable grouped by their educational plans.

18. Results of the analysis of variance for students' responses to their perception of the ability for the occupation they are planning to enter grouped by their educational plans revealed no significant differences.

19. A significant ($P<.01$) F ratio of 13.58 was observed for mean ratings of students grouped according to their educational plans in regard to the amount of work experience they had received in the occupation they are planning to enter. A multiple comparison of the mean ratings for the student groups revealed that a mean rating of 6.77 for Group 1 is significantly ($P<.05$) greater than a mean rating of 5.79 for Group 2. A mean rating of 7.56 for Group 3 is significantly ($P<.05$) greater than a mean rating of 6.77 for Group 1, and a mean rating of 7.56 for Group 3 is significantly ($P<.01$) greater than a mean rating of 5.79 for Group 2.

20. The analysis of variance for students' ratings for their perception of the knowledge of the occupation they are planning to enter grouped according to their educational plans revealed a significant ($P<.05$) F ratio of 3.19. A significant interaction was observed between student group and student grade level. This F ratio of 4.19 is significant at the .05 level of probability. A multiple comparison revealed no significant differences in the mean ratings of this statement for students grouped according to their educational plans.

21. A three-way analysis of variance for the mean ratings of students' perceptions of the value of their high school training for the occupation they are planning to enter revealed a significant ($P<.01$) F ratio of 6.58 for students grouped according to their educational plans. A multiple comparison of all group means using the Scheffé method revealed that a mean rating of 6.07 for Group 2 is significantly ($P<.01$) greater than a mean rating of 5.28 for Group 3.

22. A summary of the analysis of variance for the mean ratings in regard to students' perceptions of the amount of training their high school has provided for the occupation they are planning to enter, among students grouped according to their educational plans revealed a significant ($P<.05$) F ratio of 3.58. A multiple comparison of all group means revealed that a mean rating of 5.38 for Group 2 is significantly ($P<.05$) greater than the mean rating of 4.79 for Group 3. It should also be pointed out that this item of the rating scale received a 5 rating or less by each student group. A rating of 5 is midpoint on the scale and therefore could be considered as an average rating.

23. A three-way analysis of variance for students' responses to the amount of encouragement to continue their education beyond high school the students had received from their father, among students grouped according to their educational plans revealed an F ratio of 65.27. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. A multiple comparison of all group means indicated that a mean rating of 6.11 for Group 1 is significantly ($P<.01$) greater than the mean rating of 3.25 for Group 3. It was also revealed that a mean rating of 7.02 for Group 2 is significantly ($P<.01$) greater than the mean rating of 3.25 for Group 3.

24. A three-way analysis of variance of the mean ratings of the three student groups regarding students' perceptions of the amount of encouragement they have received from their mother to continue their education beyond high school revealed an F ratio of 86.89 which is significant at the .01 level of probability. A mean rating

of 7.89 for Group 2 is significantly ($P<.10$) greater than a mean rating of 6.89 for Group 1. It was also revealed that a mean rating of 6.89 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.82 for Group 3. A mean rating of 7.89 for Group 2 is significantly ($P<.01$) greater than the mean rating of 3.82 for Group 3.

25. An F ratio of 38.46 was observed for the mean ratings for students' perceptions of the amount of encouragement they had received from their father to attend an area vocational school, among students grouped by their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. The multiple comparison revealed that a mean rating of 5.29 for Group 1 is significantly ($P<.01$) greater than the mean ratings of 2.64 and 2.76 for Groups 2 and 3 respectively.

26. A significant ($P<.01$) F ratio of 118.41 was observed for the differences among the mean ratings for students' perceptions of the amount of encouragement they had received from their father to attend a four-year college or university, among students grouped according to their educational plans. The Scheffé method for multiple comparison of the three group means indicated that a mean rating of 6.22 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.53 and 1.30 for Groups 1 and 3 respectively. The mean rating of 2.53 for Group 1 is significantly ($P<.01$) greater than the mean rating for Group 2.

27. The three-way analysis of variance for the mean ratings by students in regard to the amount of encouragement they had received from their mother to attend an area vocational school, grouped

according to their educational plans revealed an F ratio of 61.80. This F ratio is significant at the .01 level of probability. A multiple comparison of the three group means revealed that a mean rating of 5.29 for Group 1 is significantly ($P<.01$) greater than the mean ratings of 2.81 and 2.23 for Groups 2 and 3 respectively. Also, a mean rating of 2.81 for Group 2 was found to be significantly ($P<.10$) greater than the mean rating of 2.23 for Group 3.

28. An F ratio of 143.30 was observed for differences in the group mean ratings of students regarding the amount of encouragement they had received from their mother to attend a four-year college or university. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. A mean rating of 7.21 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.93 for Group 1 and 1.66 for Group 3. It was also observed that a mean rating of 2.93 for Group 1 is significantly ($P<.01$) greater than a mean rating of 1.66 for Group 3.

29. The analysis of variance of the mean ratings for students' perceptions of the amount of encouragement they have received from their vocational agriculture instructor to attend an area vocational school revealed an F ratio of 2.73 for differences among schools. This F ratio is significant at the .01 level of probability. It was found that a significant ($P<.01$) F ratio of 11.62 existed for differences in grade level. A significant F ratio of 7.43 was observed for the differences in mean ratings for students grouped according to their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. A multiple comparison of the three group means

revealed that a mean rating of 3.75 for Group 1 is significantly ($P<.01$) greater than a mean rating of 2.67 for Group 3. It was also determined that a mean rating of 3.23 for Group 2 is significantly ($P<.10$) greater than a mean rating of 2.67 for Group 3.

30. The analysis of variance revealed an F ratio of 42.04 for differences among the three student groups for the amount of encouragement received from their vocational agriculture instructor to attend a four-year college or university. This F ratio is significant at the .01 level of probability. A significant ($P<.05$) F ratio of 1.83 was observed for differences among schools and a significant ($P<.01$) F ratio of 11.69 was observed for differences among grade levels. It should also be pointed out that a significant interaction was observed for student group and student grade level as sources of variation. It was found that a mean rating of 4.71 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 2.81 and 1.90 for Groups 1 and 3 respectively. It was also determined that a mean rating of 2.81 for Group 1 is significantly ($P<.01$) greater than a mean rating of 1.90 for Group 3.

31. A three-way analysis of variance summary for students' perceptions of the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter revealed a significant ($P<.01$) F ratio of 2.50 for variation among schools. No other significant F ratios were observed for this variable.

32. A summary of the analysis of variance for students' perceptions of the value of their FFA program in preparing them for the occupation they are planning to enter revealed a significant ($P<.01$) F

ratio of 3.55 for differences among schools. No significant differences were observed for students grouped by grade level and students grouped according to their educational plans.

33. A significant ($P<.01$) F ratio of 2.71 was observed for differences among schools regarding students' perceptions of the value of their high school vo-ag courses completed in preparing them to attend an area vocational school. A significant ($P<.01$) F ratio of 15.94 was also observed among the three student groups. A multiple comparison of all group means indicated that a mean rating of 5.30 for Group 1 is significantly ($P<.01$) greater than the mean rating of 4.04 for Group 3. It was also determined that a mean rating of 4.92 for Group 2 is significantly ($P<.01$) greater than the mean rating of 4.04 for Group 3.

34. A summary of the analysis of variance revealed a significant ($P<.01$) F ratio of 2.23 for variation among schools for students' perception of the value of their vocational agriculture courses completed in preparing them to attend a four-year college or university. It was also determined that a significant ($P<.01$) F ratio of 26.14 exists for ratings of this statement by students grouped according to their educational plans upon graduation from high school. A mean rating of 5.25 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 3.92 and 3.13 for Groups 1 and 3 respectively. It was also found that a mean rating of 3.92 for Group 1 is significantly ($P<.01$) greater than the mean rating of 3.13 for Group 3.

35. A significant ($P<.05$) F ratio of 1.64 was observed for variation among schools for students' perceptions of the value of their high

school courses completed in preparing them to attend an area vocational school. A significant ($P<.01$) F ratio of 33.71 was calculated for the differences among mean ratings of students grouped by their educational plans. Using a multiple comparison for all group means, it was found that a mean rating of 5.65 for Group 1 is significantly ($P<.01$) greater than the mean rating of 3.88 for Group 3. A mean rating of 5.44 for Group 2 is significantly ($P<.01$) greater than a mean rating of 3.88 for Group 3.

36. The three-way analysis of variance revealed a significant ($P<.01$) F ratio of 52.45 among the three student groups for students' perceptions of the value of their high school courses completed in preparing them to attend a four-year college or university. It was determined by multiple comparison that a mean rating of 6.79 for Group 2 is significantly ($P<.01$) greater than mean ratings of 4.44 and 3.57 for Groups 1 and 3 respectively. It was also found that a mean rating of 4.44 for Group 1 is significantly (P .01) greater than a mean response of 3.57 for Group 3.

37. A summary of the analysis of variance indicated a significant ($P<.01$) F ratio of 2.70 for variation among schools for students' perception of the value of their supervised occupational experience program in preparing them for the occupation they are planning to enter. No significant F ratio was observed for mean ratings of students grouped according to their educational plans upon graduation from high school.

38. The analysis of variance calculation revealed a significant ($P<.01$) F ratio of 45.86 among the three student groups for their perception of chances of success as a student attending a four-year

college or university and studying animal science. The Scheffé procedure for multiple comparison indicated that a mean rating of 6.64 for Group 2 is significantly ($P<.01$) greater than the mean rating of 4.37 and 3.57 for Groups 1 and 3 respectively. It was also determined that a mean rating of 4.37 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.57 for Group 3.

39. The analysis of variance calculation revealed a significant ($P<.01$) F ratio of 35.53 among the three student groups for their perception of chances of success as a student attending a four-year college or university and studying plant and soil science. A multiple comparison of the three group means revealed that a mean rating of 5.71 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 3.86 and 3.13 for Groups 1 and 3 respectively. A mean rating of 3.86 for Group 1 was found to be significantly ($P<.05$) greater than a mean rating of 3.13 for Group 3.

40. The three-way analysis of variance calculation for students' perceptions of their chances of success as a student attending a four-year college or university and studying agricultural mechanics, revealed a significant ($P<.01$) F ratio of 5.37 for differences in mean ratings of students grouped by their educational plans. A multiple comparison of all group means determined that a mean rating of 5.82 for Group 1 is significantly ($P<.05$) greater than a mean rating of 4.88 for Group 3. It was also revealed that a mean rating of 5.81 for Group 2 is significantly ($P<.05$) greater than the mean rating of 4.88 for Group 3.

41. The analysis of variance calculation revealed a significant ($P<.01$) F ratio of 31.83 for differences among the three student groups

in regard to students' perceptions of their chances of success as a student attending a four-year college or university and studying agricultural mechanics. A multiple comparison using the Scheffé technique revealed that a mean rating of 6.71 for Group 2 is significantly ($P<.01$) greater than mean ratings of 5.22 and 4.23 for Groups 1 and 3 respectively. It was also found that a mean rating of 5.22 for Group 1 is significantly ($P<.01$) greater than a mean rating of 4.23 for Group 3.

42. The three-way analysis of variance revealed a significant ($P<.01$) F ratio of 38.83 for differences among the three student groups calculated regarding students' perceptions of chances of success as a student attending an area vocational school and studying animal science. It was determined that a mean rating of 6.69 for Group 2 is significantly ($P<.01$) greater than mean ratings of 5.12 and 3.90 for Groups 1 and 3 respectively. It was also found that a mean rating of 5.12 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.90 for Group 3.

43. The analysis of variance calculation for students' perceptions of chances for success as a student attending an area vocational school and studying plant and soil science revealed a significant ($P<.01$) F ratio of 25.52 for differences in mean ratings among students grouped according to their educational plans. A multiple comparison of the group means revealed that a mean rating of 5.78 for Group 2 is significantly ($P<.01$) greater than the mean ratings of 4.72 and 3.62 for Groups 1 and 3 respectively. It was also found that a mean rating of 4.72 for Group 1 is significantly ($P<.01$) greater than a mean rating of 3.62 for Group 3.

44. The three-way analysis of variance for students' perceptions of chances for success as a student attending an area vocational school and studying agricultural mechanics revealed an F ratio of 12.65 for differences among mean ratings of students grouped according to their educational plans upon graduation from high school. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. A multiple comparison of the three group means indicated that a mean rating of 6.98 for Group 1 is significantly ($P<.01$) greater than the mean ratings of 5.95 and 5.51 for Group 2 and 3 respectively.

45. The analysis of variance calculation for students' perceptions of chances of success as a student attending an area vocational school and studying agricultural management among the mean ratings of students grouped according to their educational plans revealed a significant ($P<.01$) F ratio of 26.95. A significant ($P<.05$) F ratio of 1.65 was also observed for mean ratings of students grouped by the high school which they are attending. Using the Scheffé method for multiple comparison, it was determined that a mean rating of 6.28 for Group 1 and a mean rating of 6.72 for Group 3 are significantly ($P<.01$) greater than the mean rating of 4.70 for Group 3.

46. A three-way analysis of variance revealed an F ratio of 4.48 for differences in students' Animal Science Achievement Test scores among the various schools participating in the study. This F ratio with 27 and 558 degrees of freedom is significant at the .01 level of probability. A significant ($P<.05$) F ratio of 5.39 was observed for differences in mean Animal Science Achievement Test scores

between junior and senior vocational agriculture students. An F ratio of 25.32 was observed for differences in mean Animal Science Achievement Tests scores of students grouped according to their educational plans upon graduation of high school. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. The Scheffé procedure for multiple comparison was used to compare all possible pairs of group means. Using this procedure it was determined that a mean score of 61.67 for Group 2 is significantly ($P<.01$) greater than the mean scores of 57.53 and 55.30 for Groups 1 and 3 respectively. It was also found that a mean score of 57.53 for Group 1 is significantly ($P<.01$) greater than the mean score of 55.30 for Group 3.

47. The analysis of variance calculation for students' scores on the Plant and Soil Science Achievement Test group by school revealed a significant ($P<.01$) F ratio of 9.06. A significant ($P<.01$) F ratio of 26.04 was observed for differences in mean Plant and Soil Science Achievement Test scores among students grouped by their educational plans. It should also be pointed out that a significant ($P<.05$) interaction was observed between student grade level and student group. It was determined by multiple comparison that a mean Plant and Soil Science Achievement Test score of 60.99 is significantly ($P<.01$) greater than the mean scores of 55.63 and 53.47 for Groups 1 and 3 respectively. A mean score of 55.63 for Group 1 is significantly ($P<.01$) greater than a mean score of 53.47 for Group 3.

48. The analysis of variance calculation revealed a significant ($P<.01$) F ratio of 6.80 for students' scores on the Agricultural Mechanics

Achievement Test grouped by the various schools participating. A significant (P<.01) F ratio of 6.99 was observed for the differences in mean scores for students grouped according to their grade level as a source of variation in the analysis of variance calculation. No significant F ratio was observed for differences in mean scores among students grouped by their educational plans.

49. A summary of the analysis of variance calculation for students' scores on the Agricultural Management Achievement Test revealed a significant (P<.01) F ratio of 9.57 for differences among schools. It was also determined that an F ratio of 18.04 existed for differences in mean test scores for students grouped by their educational plans. This F ratio with 2 and 558 degrees of freedom is significant at the .01 level of probability. Using the Scheffé method of multiple comparison for group means, it was determined that a mean score of 63.21 for Group 2 is significantly (P<.01) greater than the mean test scores of 58.48 and 56.47 for Groups 1 and 3 respectively. A mean score of 58.48 for Group 1 is significantly (P<.01) greater than the mean score of 56.47 for Group 3.

Conclusions

The following conclusions were drawn based upon the findings of this study:

1. More than 55 percent of the junior and senior students included in this study and currently enrolled in vocational agriculture courses planned to get a job upon graduation from high school and not attend college. Only 17.3 percent of the 623 students included in this part of the study planned to attend a four-year college or university

upon graduation from high school. Whereas 26.8 percent of the 623 participants planned to attend a postsecondary area vocational school upon graduation from high school.

2. Over 57 percent of the students participating in this study indicated that they were juniors and approximately 42 percent indicated that they were seniors. There was approximately equal percentage distribution of juniors and seniors among the three student groups.
3. Students planning to attend a four-year college or university received higher grades in vocational agriculture than students planning to attend a postsecondary area vocational school upon graduation from high school. Students who planned to get a full-time job or become self-employed and not attend college received lower grades in vocational agriculture than those students who planned to receive additional formal education beyond high school.
4. Students who planned to attend a four-year college or university received higher grades in all their courses than did students who planned to attend an area vocational school upon graduation from high school. It may also be concluded that students who planned to complete additional formal education beyond high school indicated that they normally received higher grades in all their courses than students who planned to enter the world of work upon graduation from high school.
5. It was determined that a relationship does exist between students' participation in high school athletics and students' educational plans upon graduation from high school. Over 72 percent of those students who planned to attend a four-year college or university indicated that they participated in high school athletics. Whereas,

approximately 49 percent of those students who planned to attend a postsecondary area vocational school and 41.7 percent of those students who planned to enter the world of work indicated that they participated in athletics.

6. It was found that a relationship exists between students' participation in band and students' educational plans. About 32 percent of the students in Group 2 indicated that they participated in band. However, only 13.8 percent and 8.9 percent of Groups 1 and 3 respectively indicated that they participated in band.
7. It was determined that a relationship exists between students' participation in chorus and students' educational plans upon graduation from high school. Over 24 percent of students in Group 2 indicated they participated in chorus, in comparison to 15.6 percent of Group 1 and 7.8 percent of Group 3.
8. Over 84 percent of the students participating in this research study indicated that they were a member of the FFA.
9. It was determined that a relationship exists between students' participation in the 4-H Club and students' educational plans upon graduation from high school. A total of 47.2 percent of the students in Group 2 indicated that they participated in a 4-H Club. Whereas, 31.1 percent of Group 1 and 21.4 percent of Group 3 indicated their participation in the 4-H Club.
10. It was found that a relationship exists between students' participation in student government activities and students' educational plans upon graduation from high school.
11. Over 81 percent of the students participating in this study indicated that they were living on a farm. Approximately 13 percent of the

students participating in this study indicated that they lived in a city, town or village.

12. Students who planned to attend a four-year college or university planned to receive a greater number of years of posthigh school education than students who planned to attend a postsecondary area vocational school upon graduation from high school. Differences observed in mean responses to this variable would be expected since students were grouped according to their educational plans upon graduation from high school.

13. The majority (51.6 percent) of the students sampled in this study indicated that they sometimes work outside of their family and farm or home. Over 29 percent of the students in the three groups indicated that they had a fairly regular job outside their family and home or farm. Whereas 19 percent of the students sampled indicated that they did not work outside the family and home or farm. A relationship does exist between the extent of students working outside the family and home or farm, and students' educational plans upon graduation from high school.

14. The majority (47 percent) of students in all three groups indicated that their father had been most influential in their choice of occupation. A greater percentage (52.6 percent) of students who planned to get a job upon completion of high school indicated their father had the most influence on their choice of occupation. This is in comparison to 42.9 percent for Group 1 and 34.4 percent for Group 2. A relationship does exist between students' response to the person having the most influence on their choice of occupation, and their educational plans upon graduation from high school.

15. Students who planned to enter the world of work upon graduation from high school were more certain of their choice of occupation than students who planned to attend a four-year college or university. A total group mean rating of 6.89 for this variable would suggest that students were relatively certain that they will enter the occupation they have chosen.

16. A total group mean rating of 7.59 would indicate that students participating in this study had given considerable amount of thought to their choice of occupation upon completion of their formal education.

17. A total group mean rating of 7.79 would suggest that these students feel rather competent in their ability for the occupation they are planning to enter.

18. Students who planned to enter the world of work upon graduation from high school indicated they had received a greater amount of work experience for the occupation they planned to enter than did students who planned to continue their formal education beyond high school. It may also be concluded that students who planned to attend a postsecondary area vocational school indicated that they had received a greater amount of work experience for the occupation they are planning to enter than did students who planned to attend a four-year college or university. Students in all three groups indicated a considerable amount of work experience in the occupation they are planning to enter.

19. A total group mean rating of 7.18 would indicate that students perceived themselves above average for the knowledge of the occupation they are planning to enter.

20. Students who planned to attend a postsecondary area vocational school indicated a higher rating in regard to their perception of the value of their high school training for the occupation they are planning to enter than did students who planned to enter the world of work upon graduation from high school. A total group mean rating of 5.54 would suggest that students in all three groups perceived the value of their high school training for the occupation they are planning to enter as just slightly above 5.0 which is midpoint on the rating scale.

21. It was found that students who planned to attend a postsecondary area vocational school perceived their high school as providing a greater amount of training for the occupation they are planning to enter than did students who planned to get a full-time job or work for themselves upon graduation from high school. It should be pointed out that this item of the rating scale received a 5.0 rating or less by each student group. A rating of 5.0 is midpoint of the scale and therefore could be considered as an average rating.

22. Students who planned to obtain post high school education had received more encouragement from their father to receive additional formal education than did students who planned to enter the world of work upon graduation from high school. From this observation, it would appear that the father does have a definite influence upon their children's plans for attending college. A mean rating of 3.25 for Group 3 would indicate a relatively low amount of encouragement these students had received from their father.

23. It was determined that students who planned to attend college received a greater amount of encouragement from their mother to do so

than did students who did not plan to attend college. It may also be concluded that students who planned to attend a four-year college or university had received a greater amount of encouragement from their mother to continue their education beyond high school than did students who planned to attend a postsecondary area vocational school. From this, it may be concluded that the students' mother had a definite influence upon their educational plans upon graduation from high school. A mean rating of 3.82 for Group 3 would indicate a small amount of encouragement.

24. Students who planned to attend an area vocational school did receive a greater amount of encouragement from their father to attend an area vocational school than did students who planned to attend a four-year college or university, and students who planned to enter the world of work. The mean ratings of 2.64 and 2.76 for Groups 2 and 3 respectively may be considered to be a low amount of encouragement received from their father to attend an area vocational school.

25. It may be concluded that students who planned to attend a four-year college or university received a greater amount of encouragement from their father to do so than did students who planned to attend a postsecondary area vocational school, and students who planned to enter the world of work. Students who planned to attend a postsecondary area vocational school indicated that they had received a greater amount of encouragement from their father to attend a four-year college or university than did students who planned to enter the world of work upon graduation from high school. The mean ratings of 2.53 and 1.30 for Groups 1 and 3 respectively would

indicate a relatively low amount of encouragement received from their father to attend a four-year college or university.

26. Students who planned to attend a postsecondary area vocational school indicated that they had received a greater amount of encouragement from their mother to do so than did students who planned to attend a four-year college or university and students who planned to enter the world of work. Students who planned to attend a four-year college or university indicated they had received a greater amount of encouragement from their mother to attend a postsecondary area vocational school than did students who planned to enter the world of work. From this observation is may be concluded that the students' mother did have a definite influence as to their plans to to attend an area vocational school. The mean rating of 2.81 for Group 2 and 2.23 for Group 3 would indicate a small amount of encouragement received from their mother to attend an area vocational school.

27. Students who planned to attend a four-year college or university received a greater amount of encouragement from their mother to do so than did students who planned to enter the world of work upon graduation from high school. It may also be concluded that students who planned to attend a postsecondary area vocational school received a greater amount of encouragement from their mother to attend a four-year college or university than did students who planned to get a full-time job and not attend college. The mean ratings of 2.93 and 1.66 for Groups 1 and 3 would indicate a relatively low amount of encouragement received from their mother to attend a four-year college or university.

28. Students who planned to continue their formal education beyond high school received a greater amount of encouragement from their vocational agriculture instructor to attend an area vocational school than did students who planned to enter the world of work. It would appear from the data received for this variable that the vocational agriculture instructors had given their students a relatively low amount of encouragement to attend an area vocational school upon graduation from high school.
29. Students who planned to attend a four-year college or university received a greater amount of encouragement from their vocational agriculture instructor to do so than did students who planned to attend an area vocational school, and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school received a greater amount of encouragement from their vo-ag instructor to attend a four-year college or university than did students who planned to enter the world of work upon graduation from high school.
30. It appears that students participating in this study had received more encouragement from their vocational agriculture instructor to attend an area vocational school than the encouragement received to attend a four-year college or university.
31. A total group mean rating of 5.41 would suggest that students in all three groups placed a slightly above average rating for the value of their high school vocational agriculture courses completed in preparing them for the occupation they are planning to enter.
32. Students ratings grouped by school differed as to their perception of the value of their high school vocational agriculture courses

completed in preparing them to attend a postsecondary area vocational school. Students who planned to continue their formal education beyond high school perceived their vocational agriculture courses completed as being of greater value in preparing them to attend an area vocational school than did students who planned to enter the world of work upon graduation from high school. The mean ratings of 4.92 and 4.04 for Groups 2 and 3 would suggest slightly below average rating for students' perception of the value of their vo-ag courses completed in preparing them to attend an area vocational school.

33. Students who planned to attend a four-year college or university indicated a higher value regarding vocational agriculture courses completed in preparing them to attend a four-year college or university than did students who planned to attend an area vocational school, and students who planned to get a full-time job upon graduation from high school. It may also be concluded that students who planned to attend an area vocational school perceived their vocational agriculture courses to be of greater value in preparing to attend a four-year college or university than did students who planned to get a full-time job upon graduation from high school. The mean ratings of 3.92 and 3.13 for Groups 1 and 3 respectively suggest a relatively low value considering 5.0 as midpoint or average on the rating scale.

34. Students who planned to receive formal education beyond high school placed a greater value of their high school courses completed in preparing them to attend an area vocational school than did students who planned to enter the world of work. A mean rating of

3.88 for Group 3 may be considered to be a below average rating for this variable.

35. Students who planned to attend a four-year college or university placed a greater value on their high school courses completed in preparing them to attend a four-year college or university than did students who planned to attend an area vocational school, and students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school placed a greater value on their high school courses completed in preparing to attend a four-year college or university than did students who planned to enter the world of work. A mean rating of 3.57 for Group 3 may be considered to be a relatively low rating.

36. Students who planned to attend a four-year college or university indicated a greater chance for success as a student if they were to attend a four-year college or university and study animal science than did students who planned to attend an area vocational school, and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school indicated a greater chance for success as a student if they were to attend a four-year college or university and study animal science than did students who planned to enter the world of work upon graduation from high school.

37. It may be concluded that students who planned to attend a four-year college or university indicated a greater chance for success as a student attending a four-year college or university and studying plant and soil science than did students who planned to attend an area vocational school, and students who planned to enter the world

of work. It may also be concluded that students who planned to attend an area vocational school indicated a greater chance for success as a student attending a four-year college or university studying plant and soil science than students who planned to get a full-time job after graduation from high school. However, mean ratings of 3.86 and 3.13 for Groups 1 and 3 respectively may be considered below average ratings.

38. Students who planned to receive formal education beyond high school indicated a greater chance for success as a student attending a four-year college or university and studying agricultural mechanics than did students who planned to enter the world of work upon graduation from high school. It appears that students in Group 3 perceived their ability to be greater in agricultural mechanics than other areas of agriculture.

39. Students who planned to attend a four-year college or university indicated a greater chance of success as a student attending a four-year college or university and studying agricultural management than did students who planned to get a full-time job. It may further be concluded that students who planned to attend an area vocational school indicated a greater chance for success as a student attending a four-year college or university and studying agricultural management than did students who planned to get a full-time job upon graduation from high school.

40. It may be concluded that students who planned to attend a four-year college or university indicated a greater chance for success as a student attending an area vocational school and studying animal science than did students who planned to attend an area vocational

school, and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school were more certain of success as a student attending an area school and studying animal science than students who planned to enter the world of work upon graduation from high school.

41. Students who planned to attend a four-year college or university were more certain of success if they were to attend an area vocational school and study plant and soil science than certainty expressed by students who planned to attend an area vocational school, and students who planned to enter the world of work upon graduation from high school. Also, it may be concluded that students who planned to attend an area vocational school were more certain of success if they were to attend an area vocational school and study plant and soil science than certainty expressed by students who planned to enter the world of work upon graduation from high school. A mean rating of 3.62 for Group 3 may be considered to be a relatively low rating.

42. Students who planned to attend an area vocational school were more certain of their success as a student if they attended an area vocational school and studied agricultural mechanics than certainty expressed by students who planned to attend a four-year college or university, and students who planned to enter the world of work.

43. Students who planned to attend an area vocational school, or a four-year college or university indicated a greater chance for success if they were to attend an area vocational school and study agricultural management than did students who planned to get a full-time job upon graduation from high school.

44. From the analysis of the Animal Science Achievement Test scores, it may be concluded that students who planned to attend a four-year college or university possessed a higher level of achievement in animal science than did students who planned to attend an area vocational school, and students who planned to enter the world of work. It may be further concluded that students who planned to attend an area vocational school possessed a higher level of achievement in animal science than did students who planned to enter the world of work upon graduation from high school.

45. An analysis of the Plant and Soil Science Achievement Test scores revealed that students who planned to attend a four-year college or university possessed a higher level of achievement in plant and soil science than students who planned to attend an area vocational school. Also, it may be concluded that students who planned to attend an area vocational school possessed a higher level of achievement in plant and soil science than students who planned to get a full-time job upon graduation from high school.

46. It appears that students in Group 3 possessed a higher level of achievement in agricultural mechanics than other areas of agriculture.

47. From the analysis of the Agricultural Management Achievement Test scores, it may be concluded that students who planned to attend a four-year college or university possessed a higher level of achievement in agricultural management than students who planned to enter the world of work. It may also be concluded that students who planned to attend an area vocational school possessed a higher level of achievement in agricultural management than students who planned to enter the world of work upon graduation from high school.

Limitations

The generalizations made from this research study should be subject to the following limitations:

1. This study was basically an ex post facto research design. Therefore, no attempts were made to control or manipulate the independent variables.
2. The population for this study consisted of students enrolled in secondary vocational agriculture programs in Iowa. Generalizations from this study outside the state of Iowa should be made with caution.
3. This study was limited to junior and senior vocational agriculture students. Therefore the extent of generalization to other grade levels or occupational areas should be done with caution.
4. The sample for this research study consisted of 30 schools. No attempt was made to identify participants by selecting a completely randomized sample of students. The data collection instruments were administered in a group setting by the vocational agriculture instructor.

Recommendations

The findings of this study reveal that there are differences in selected factors related to educational decision-making among vocational agriculture students grouped according to their stated educational plans upon graduation from high school. The following are recommendations preceded by 12 selected conclusions upon which the recommendations were based. These recommendations appear worthy of consideration by high school vocational

agriculture instructors, vocational guidance counselors, postsecondary area vocational school personnel, teacher educators, state department personnel, and others who are in a position to assist students in establishing and attaining their educational and occupational goals. These statements and recommendations should have direct implications for those individuals involved in the development of secondary and postsecondary agriculture programs.

1. Over 55 percent of the students participating in this study indicated that they planned to get a job upon graduation from high school and not attend college.
   A. Developing agricultural job entry level skills should be a priority in the secondary vocational agriculture curriculum.
   B. Instructional programs in vocational agriculture should be structured in such a manner as to assure that students will attain the necessary knowledge and skills needed for immediate entry into occupations, as well as the option to pursue additional formal education if they so desire.
   C. The vocational agriculture curriculum should include specialized programs following one or two years of basic instruction to prepare for specific agricultural occupations.
   D. Entrepreneurship in agricultural production and/or agribusiness should be encouraged, and the curriculum should be structured as to include such training.
   E. There is a need for appropriate practical, participating experiences in agriculture through supervised occupational experience programs to facilitate transition between school and the world of work.
   F. Junior high school occupational exploratory programs should be

developed to assist students in identifying their vocational interests, assess their vocational strengths, and set tentative occupational goals so that relevant instruction may be provided. Vocational agriculture instructors and vocational guidance counselors should provide appropriate assistance to students who do not plan to continue their formal education beyond high school.

G. Administrators should maintain a keen sense of awareness of the importance of the vocational agriculture program in their high school curriculum. There is an expanding demand for people who possess the knowledge and skills needed for the vast array of jobs available in agriculture.

H. Assistance in employment placement should be provided and planned follow-up activities conducted.

2. Approximately 27 percent of the students participating in this study planned to attend a postsecondary area vocational school.

A. Greater emphasis should be placed on articulation between secondary and postsecondary programs of agriculture.

B. Continuous communication between high school and postsecondary area vocational school personnel should be maintained.

C. High school students should be provided with current program and curriculum materials from the various area vocational schools.

D. Postsecondary area vocational schools should assess the knowledge and skills possessed by these incoming students and provide educational experiences accordingly.

3. About 17 percent of the students included in this study planned to attend a four-year college or university.

A. Greater efforts should be expended in the articulation between

secondary agriculture programs and agriculture programs at the four-year colleges and universities.

B. High school students should be provided with current information about agricultural programs and curricula opportunities at four-year colleges and universities.

C. Four-year colleges and universities should assess the level of knowledge and skills possessed by these incoming students and plan educational experiences accordingly.

4. Students grouped by their educational plans differed in their academic achievement as measured by grades received in courses completed.

A. Students planning to attend a four-year college or university appear more academically oriented, and thus should be challenged regarding the educational opportunities available to them at four-year colleges and universities.

B. Although it appears that students who planned to enter the world of work and not attend college were less academically oriented, they should be informed of the many alternatives for educational and occupational preparation.

5. It was determined that a relationship existed between students' participation in high school activities and students' educational plans.

A. Students should be encouraged to participate in high school activities which are of interest to them and will assist them in their physical, mental, and social development.

B. Since the FFA is an integral part of the vocational agriculture program, all vocational agriculture students should become active FFA members.

6. This study revealed that over 80 percent of the students participating

in this study were living on a farm.

A. Instructional programs should continue to be broadened to include training for employment in both production agriculture and agribusiness occupations.

B. Students who do not live on a farm but have interests in agriculture should be informed of the benefits of the agricultural program for both on-farm and off-farm students.

7. It was discovered that parents were very influential in students' educational and occupational plans.

A. Parents should be provided with current occupational information in agriculture.

B. Parents should be provided with current information regarding program and curricula offerings at both postsecondary area vocational schools and four-year colleges and universities.

C. Vocational agriculture instructors and guidance counselors should aid parents in assisting their children in establishing and attaining their educational and occupational goals.

D. Parents should be involved in planning and conducting educational experiences for their children.

8. Students differed in the amount of work experience they had received for the occupation they are planning to enter.

A. Appropriate practical, participating experiences in agriculture through supervised occupational experience programs should be an individualized part of the curriculum for all students in vocational agriculture.

B. Alternative types of supervised occupational experience programs should be provided to meet the needs of students preparing for an

array of agricultural occupations.

C. Supervised occupational experience programs should be recognized as an integral part of the vocational agriculture program, and resources should be allocated to plan and coordinate such programs.

D. Postsecondary occupational experiences should build upon the experiences provided at the secondary level.

9. Students differed in their perceptions regarding the value and amount of high school training received for the occupation they are planning to enter.

A. The vocational agriculture curriculum should be closely integrated with other curricula in the high school.

B. Career education concepts should be integrated into the high school curriculum.

C. Single-teacher vocational agriculture programs should become multiple departments to more effectively prepare students for on-farm and off-farm agricultural occupations.

10. It appears that students participating in this study had received more encouragement from their vocational agriculture instructor to attend an area vocational school than the encouragement received to attend a four-year college or university.

A. Vocational agriculture instructors and guidance counselors should inform students of the various educational opportunities available at postsecondary area vocational schools and four-year institutions.

B. Vocational agriculture instructors should have access to current educational and occupational information.

11. Students differed in their perceptions of the value of their vocational agriculture and other courses completed in preparing them to continue

their formal education beyond high school.

A. Vocational agriculture students should be informed of the various alternatives for postsecondary education available to them.

B. Students should be made aware of the value of their educational experiences in pursuing their future educational and occupational goals.

12. Students participating in this study differed in their achievement in animal science, plant and soil science and agricultural management when they were grouped by their educational plans.

A. Personnel at postsecondary institutions should be aware of these differences and should plan agricultural programs accordingly.

B. Students' competency level in agriculture should be continually evaluated and provisions should be made for advanced and special needs students.

REFERENCES

1. Broyles, S.C. The teacher's role in guidance. Agricultural Education Magazine, Vol. 42, No. 2 (August, 1969), p. 29.

2. Byler, B.L. A study of factors associated with the vocational development of high school agricultural occupations students. Urbana, Illinois: Unpublished doctoral dissertation, University of Illinois, 1972.

3. Byram, H.M. Guidance in agricultural education. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1966.

4. Byram, H.M. The modern guidance role of the teacher of agriculture. Agricultural Education Magazine, Vol. 36, No. 10 (April, 1964), pp. 219-220.

5. Campbell, D.T. and J.C. Stanley. Experimental and quasi-experimental designs for research. Chicago, Illinois: Rand McNally and Co., 1966.

6. Carpenter, E.T. and J.H. Rodgers. Review and synthesis of research in agricultural education. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Ohio State University, 1970, p. 38.

7. College plans of high school seniors. Suitland, Maryland: Current Population Reports, U.S. Bureau of Census, Series No. 252, 1973.

8. College plans of high school seniors. Suitland, Maryland: Current Population Reports, U.S. Bureau of Census, Series No. 270, 1974.

9. Directory vocational agriculture departments, 1974-75, Des Moines, Iowa: State Department of Public Instruction, 1974.

10. Educational aspirations and expectations of students in rural Washington high schools. Pullman, Washington: Staff report, College of Agriculture, 1972.

11. Educational plans of Montana high school seniors. Helena, Montana: Staff report, Montana Commission on Postsecondary Education, 1974.

12. Evans, R.N. Foundations of vocational education. Columbus, Ohio: Merrill Publishing Co., 1971.

13. Ferguson, G.A. Statistical analysis in psychology and education. New York: McGraw-Hill Book Co., 1971.

14. Fetters, W.B. A capsule description of high school seniors base year survey. National longitudinal study of the high school class of 1972. Washington, D.C.: National Center for Educational Statistics, Dept. of Health, Education and Welfare, Office of Education, 1974.

15. Grant, B. and G.D. Demos. Pertinent factors for the consideration of students, educators, and practitioners. Vocational Guidance Readings. Springfield, Illinois: Charles C. Thomas Publishers, 1965, pp. 7-14.

16. Havighurst, R.J. Youth in exploration and man emergent. In Borow, H. Man in a world at work. Boston: Houghton Mifflin Co., 1964, pp. 215-236.

17. Hochschild, S.F. and J.G. Johnston. Postsecondary education access study. Part I. Vermont high school student aspiration study. Interim report, 1973.

18. Hudson, A.M. and N.W. Rives, Jr. The educational and occupational plans of Delaware high school seniors. Newark, Delaware: Division of Urban Affairs, Delaware University, 1973.

19. Lingreen, H.G. and R.J. Eyre. Beyond the twelfth grade. An analysis of the postgraduation plans of high school seniors in Idaho. Pocatello, Idaho: Government Research Institute, Idaho State University, 1971.

20. Linicum, M. Future plans of 1972 Oregon high school seniors. Salem, Oregon: Coordinating Council, 1972.

21. Little, K.G., A. Donaldson, R. Fenske, H. Robert, and N. Fintel. Exploration into the college plans and experiences of high school graduates. A statewide inquiry. Madison, Wisconsin: Madison School of Education, Wisconsin, University, 1959.

22. Lungstrum, R.M. Selected factors related to occupational preference of high school students enrolled in vocational education programs in the Wichita public schools. Urbana, Illinois: Unpublished doctoral dissertation, University of Illinois, 1973.

23. Marland, S.P. Career education now. An address presented at the 1971 convention of the National Association of Secondary School Proncipals, Sam Houston Coliseum, Houston, Texas.

24. Mondart, C.L., G.M. Curtiss and L.H. Dobbins. Educational and occupational aspirations and expectations of high school youth. Baton Rouge, Louisiana: Department of Agricultural Education, 1970.

25. Opportunities in Iowa's area schools. Des Moines, Iowa: State Department of Public Instruction.

26. Peterson, R.L., L.H. Harvill, and J.T. Hoerner. Agribusiness Achievement Test. Boston: Houghton Mifflin Co., 1973.

27. Phipps, L.J. Handbook on agricultural education in public schools. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1965, p. 571.

28. Post high school career preference study of district three; southwest Wisconsin high school junior students. Fannimore, Wisconsin: District III Research and Planning Division, Southwest Vocational and Technical School, 1972.

29. Quesada, R.M. and S.K. Seaver. Education, employment, income of high school vocational interests and plans of Indiana's 70,000 high school graduates in 1966. Seventy thousand high school seniors, their educational and vocational plans. Indianapolis, Indiana, 1967.

30. Report of the survey of the educational and vocational interests and plans of Indiana's 70,000 high school seniors. Their educational and vocational plans. Indianapolis, Indiana: Indiana Vocational and Technical college, 1967.

31. Shill, J.F. Educational aspirations, expectations and abilities of rural male high school seniors in Mississippi. Washington, D.C.: Dept. of Health, Education, and Welfare, Office of Education, Report 24.

32. Siemens, L.B. and J.B. Jackson. Educational plans and their fulfillment. A study of selected high school students in Manitoba. Winnipeg, Manitoba: Manitoba University, 1965.

33. Slocum, W.L. and G.R. Garrett. Educational and occupational aspirations and expectations of rural youth. Pullman, Washington: Dept. of Rural Sociology, Washington State University, 1965.

34. Soper, E.L. A study of the factors influencing the postsecondary and vocational decisions of Utah high school students. Salt Lake City, Utah: Utah State Board of Education, 1971.

35. Sperry, I.V. Educational and vocational goals of rural youths in the south. Raleigh, North Carolina: North Carolina State University, 1965.

36. Steel, G.D. and J.H. Torri. Principles and procedures of statistics. New York: McGraw-Hill Book Co., 1960.

37. Summary of educational activities in agriculture/agribusiness provided by local school districts. Des Moines, Iowa: State Department of Public Instruction, 1974.

38. Thomas, L. Occupational structure and education. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1956.

39. U.S. panel of consultants on vocational education. Education for a changing world of work. Washington, D.C.: Government Printing Office, 1963.

40. Venn, G. Man, education, and work. Washington, D.C.: American Council on Education, 1964.

41. Vocational education amendments of 1968. Agricultural Education Magazine, Vol. 41, No. 7 (January, 1969), pp. 162-164.

42. Warmbrod, J.E. Vocational education and career exploration. Agricultural Education Magazine, Vol. 42, No. 2 (August, 1969), pp. 27-28.

43. White, L.E. Guidance opportunities in vocational agriculture. Agricultural Education Magazine, Vol. 35, No. 9 (March, 1963), pp. 196-197.

44. Winefordner, D. A report of the students' vocational interest surveys in Ohio schools. Columbus, Ohio: Ohio State Department of Education, 1965.

APPENDIX A

PERSONAL, FAMILY, AND COMMUNITY DATA INSTRUMENT

PERSONAL, FAMILY, AND COMMUNITY DATA RELATED TO EDUCATIONAL AND OCCUPATIONAL PLANS OF IOWA VOCATIONAL AGRICULTURE STUDENTS

Dear Students:

The Agricultural Education Department at Iowa State University would like to thank you for cooperating with us in conducting this study. We are attempting to determine the educational and occupational goals of Iowa vocational agriculture students and factors related to these goals.

This questionnaire is an attempt to get a better picture of the problems young people face in choosing their life's occupation, and the feelings they have toward these problems. By carefully filling out this questionnaire, you will assist us in acquiring a better understanding of these problems. This information will be of great value to your vocational agriculture instructor, guidance counselor, and other teachers in your school in developing program of vocational agriculture, counseling, and occupational orientation.

Thank you very much for your cooperation in completing this questionnaire.

PLEASE FOLLOW THESE DIRECTIONS:

1. Read each item carefully. Answer to the best of your knowledge.

2. Be sure to answer each question. Where there are brackets, fill in an "x" by the response which answers the question the way you truly feel, not the way you think other people will want you to answer them. Where only a space is left, enter the words called for.

3. Part II will ask that you rate each statement on a rating scale from low to high.

4. If you have any questions about how to complete this questionnaire, please ask your vocational agriculture instructor for assistance.

PART I

1. MY NAME IS _____

2. I AM A

   1. ( ) Freshman
   2. ( ) Sophomore
   3. ( ) Junior
   4. ( ) Senior

3. The number of semesters of vocational agriculture I have completed is (including this semester):

   1. ( ) 1 semester
   2. ( ) 2 semesters
   3. ( ) 3 semesters
   4. ( ) 4 semesters
   5. ( ) 5 semesters
   6. ( ) 6 semesters
   7. ( ) 7 semesters
   8. ( ) 8 semesters

4. The types of grades I normally get in vocational agriculture are:

   1. ( ) all A's
   2. ( ) mostly A's but few B's
   3. ( ) half A's and B's.
   4. ( ) about equal A's, B's and C's
   5. ( ) mostly B's and C's
   6. ( ) mostly C's but few B's
   7. ( ) C's and D's
   8. ( ) D's and F's

5. The types of grades I normally get in all my courses are:

   1. ( ) all A's
   2. ( ) mostly A's but few B's
   3. ( ) half A's and B's
   4. ( ) about equal A's, B's and C's
   5. ( ) mostly B's and C's
   6. ( ) mostly C's but few B's
   7. ( ) C's and D's
   8. ( ) D's and F's

6. The kinds of activities in which I participate are (please check all that apply):

   ( ) annual
   ( ) athletics
   ( ) band-orchestra
   ( ) chorus
   ( ) debates
   ( ) FFA
   ( ) 4-H
   ( ) hobby club
   ( ) student government
   ( ) other _____
   ( ) _____
   ( ) _____

7. I live

1. ( ) on a farm
2. ( ) in the open country, but not on a farm
3. ( ) in a village under 2,500
4. ( ) in a town of 2,500-10,000
5. ( ) in a city over 10,000

8. The occupation that I plan to enter is (indicate particular type of job)

_____.

9. Upon completion of high school, I plan to

1. ( ) Attend a postsecondary area vocational school or community college. Name of area vocational school or community college planning to attend.

2. ( ) Attend a four-year college or university. Name of college or university planning to attend. _____.

3. ( ) Get a full-time job or work for myself and not attend college.

10. The number of years of further education I plan to get beyond high school is

1. ( ) none, or less than one year.
2. ( ) one year.
3. ( ) two years.
4. ( ) three years.
5. ( ) four years.
6. ( ) five years.
7. ( ) six years.
8. ( ) seven years.
9. ( ) eight years or more.

11. As to working while I am in high school

1. ( ) I have a fairly regular job outside my family and home or farm.
2. ( ) I sometimes work outside my family and home or farm.
3. ( ) I do not work outside my family and home or farm.

12. The person who had the most influence on my choice of an occupation was

1. ( ) my father.
2. ( ) my mother.
3. ( ) my brother or sister.
4. ( ) another relative.
5. ( ) counselor.
6. ( ) close friend.
7. ( ) vo-ag instructor.
8. ( ) another teacher.
9. ( ) other than above _____.

PART II

Please rate each of the following statements on a 10 point scale from low to high. Read each statement carefully and rate how you feel about that statement by circling either 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, or 10. A score of 0 is the lowest possible rating and a score of 10 is the highest possible rating. Circle only one number for each statement to indicate how you feel about that statement.

	STATEMENT	RATING										
		Low										High
1.	Amount of certainty that I will enter the occupation I have chosen....	0	1	2	3	4	5	6	7	8	9	10
2.	Amount of thought I have given to my choice of occupation.....	0	1	2	3	4	5	6	7	8	9	10
3.	My ability for the occupation I have chosen.....	0	1	2	3	4	5	6	7	8	9	10
4.	Amount of work experience I have had in the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
5.	My knowledge of the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
6.	Value of my high school training for the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
7.	Amount of training my high school has provided for the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
8.	Amount of encouragement received from my father to continue my education beyond high school.....	0	1	2	3	4	5	6	7	8	9	10
9.	Amount of encouragement received from my mother to continue my education beyond high school.....	0	1	2	3	4	5	6	7	8	9	10
10.	Amount of encouragement received from my father to attend a post-secondary area vocational school.....	0	1	2	3	4	5	6	7	8	9	10
11.	Amount of encouragement received from my father to attend a four-year college or university.....	0	1	2	3	4	5	6	7	8	9	10

		Low										High
12.	Amount of encouragement received from my mother to attend a post-secondary area vocational school.....	0	1	2	3	4	5	6	7	8	9	10
13.	Amount of encouragement received from my mother to attend a four-year college or university.....	0	1	2	3	4	5	6	7	8	9	10
14.	Amount of encouragement received from my vo-ag instructor to attend a postsecondary area vocational school.....	0	1	2	3	4	5	6	7	8	9	10
15.	Amount of encouragement received from my vo-ag instructor to attend a four-year college or university.....	0	1	2	3	4	5	6	7	8	9	10
16.	Value of my high school vo-ag courses completed in preparing me for the occupation I plan to enter....	0	1	2	3	4	5	6	7	8	9	10
17.	Value of the FFA program in preparing me for the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
18.	Value of my vo-ag courses completed in preparing me to attend a post-secondary area vocational school.....	0	1	2	3	4	5	6	7	8	9	10
19.	Value of my vo-ag courses completed in preparing me to attend a four-year college or university.....	0	1	2	3	4	5	6	7	8	9	10
20.	Value of my high school courses in preparing me to attend a post-secondary area vocational school.....	0	1	2	3	4	5	6	7	8	9	10
21.	Value of my high school courses in preparing me to attend a four-year college or university.....	0	1	2	3	4	5	6	7	8	9	10
22.	Value of my supervised occupational experience program (supervised farming or agribusiness placement) in preparing me for the occupation I plan to enter.....	0	1	2	3	4	5	6	7	8	9	10
23.	My chances of success as a student if I were to attend a four-year college or university and study animal science.....	0	1	2	3	4	5	6	7	8	9	10

	Low										High
24. My chances of success as a student if I were to attend a four-year college or university and study plant and soil science	0	1	2	3	4	5	6	7	8	9	10
25. My chances of success as a student if I were to attend a four-year college or university and study agricultural mechanics	0	1	2	3	4	5	6	7	8	9	10
26. My chances of success as a student if I were to attend a four-year college or university and study agricultural management	0	1	2	3	4	5	6	7	8	9	10
27. My chances of success as a student if I were to attend a postsecondary area vocational school and study animal science	0	1	2	3	4	5	6	7	8	9	10
28. My chances of success as a student if I were to attend a postsecondary area vocational school and study plant and soil science	0	1	2	3	4	5	6	7	8	9	10
29. My chances of success as a student if I were to attend a postsecondary area vocational school and study agricultural mechanics	0	1	2	3	4	5	6	7	8	9	10
30. My chances of success as a student if I were to attend a postsecondary area vocational school and study agricultural management	0	1	2	3	4	5	6	7	8	9	10

APPENDIX B

COPY OF LETTER SENT TO VOCATIONAL AGRICULTURE INSTRUCTORS REQUESTING THEIR COOPERATION IN CONDUCTING THE STUDY

Iowa State University of Science and Technology Ames, Iowa 50010

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

The staff in the Agricultural Education Department at Iowa State University is initiating a study being funded through the Agriculture and Home Economics Experiment Station to ascertain the educational and occupational goals of high school juniors and seniors who are enrolled in vocational agriculture, and then compare these goals to personal variables which each student possesses.

The means by which we plan to collect the information for this study consists of two instruments. The first will be a general questionnaire covering the student variables in which we are interested. The second instrument is a two-hour standardized Agri-Business Achievement test to be administered to the students.

We are seeking your approval that we may use your school and vocational agriculture department as a part of the sample for this project. As your school's cooperation will benefit our goals, in return, we would hope that we could complement your vocational agricultural program by providing the results of the achievement test to your vocational agriculture instructor.

Please complete the enclosed stamped postcard and return it to us at your earliest convenience. If you have any questions, please write or call 515/294/5872. Upon your approval we will contact your vocational agriculture instructor.

Thank you for your time, and we will be looking forward to working with your school in the future.

Sincerely,

Harold R. Crawford Professor and Head Agricultural Education	Bennie L. Byler Assistant Professor Agricultural Education	Tom Archer Research Assistant Agricultural Education

TA/mdd

APPENDIX C

LIST OF HIGH SCHOOLS PARTICIPATING IN THE STUDY

SCHOOLS RANDOMLY SELECTED TO PARTICIPATE IN THE STUDY

School	Vocational Agriculture Instructor
Adair-Casey Comm. Adair, Iowa	Doug Timmons
Algona Comm. Algona, Iowa	Wendell Phelps
Atlantic Comm. Atlantic, Iowa	Ronald Beaver
Belle Plaine Comm. Belle Plaine, Iowa	Howard Marsh
Brooklyn-Guernsey-Malcom Comm. Brooklyn, Iowa	Larry Dayton
Dunkerton Comm. Dunkerton, Iowa	Lyle Bare
East Greene Comm. Grand Junction, Iowa	David Tokheim
Graettinger Comm. Graettinger, Iowa	Charles Moser
Greenfield Comm. Greenfield, Iowa	George Freese, Jr.
Iowa Valley Comm. Marengo, Iowa	Robert Taylor
Lemars Comm. Lemars, Iowa	John Rix
Maple Valley Comm. Mapleton, Iowa	Norman Mecklenburg
Mediapolis Comm. Mediapolis, Iowa	James Howell
M-F-L Comm. Monona, Iowa	John Wachter
Missouri Valley Comm. Missouri Valley, Iowa	Gene Weldon
Mt. Pleasant Comm. Mt. Pleasant, Iowa	Ralph Stuekerjuergen

School	Vocational Agriculture Instructor
Murray Comm. Murray, Iowa	Brent Hanna
Nashua Comm. Nashua, Iowa	Richard Gingrich
New Providence Comm. New Providence, Iowa	Gary Glawe
Odebolt-Arthur Comm. Odebolt, Iowa	Donald Kearney
Osage Comm. Osage, Iowa	Lewis Lauterbach
Oskaloosa Comm. Oskaloosa, Iowa	Charles Perdue
Pekin Comm. Packwood, Iowa	Allen Henigan
Riceville Comm. Riceville, Iowa	Kenneth Redmann
Rock Valley Comm. Rock Valley, Iowa	Verlyn Sneller
Sheldon Comm. Sheldon, Iowa	Fred Van Loh
Southeast Polk Runnels, Iowa	James Appleget
Thompson Comm. Thompson, Iowa	Kingsley Johnson
West Liberty Comm. West Liberty, Iowa	Richard Wehde
Wilton Comm. Wilton, Iowa	Gary Bennett

APPENDIX D

FOLLOW-UP LETTER AND DIRECTIONS USED FOR ADMINISTERING THE INSTRUMENTS

Iowa State University of Science and Technology Ames, Iowa 50010

Department of Agricultural Education
223 Curtiss Hall
Telephone 515-294-5872

We appreciate your interest and cooperation in the completion of our survey of high school junior and senior vocational agriculture students, and sincerely thank you for your help. We hope that the results of this project will assist in conducting your vocational agriculture program.

Enclosed you will find a sufficient number of questionnaires and answer sheets for all of the junior and senior students who are enrolled in the vocational agriculture classes at your high school. To reduce cost and bulk of postage, we have included only enough test booklets for your largest class, either juniors or seniors. We have assumed that these instruments will be administered during regular class time, and that your regular classes will be no larger than the number of test booklets which we have included. If there are not enough materials, please call us immediately at 515-294-5872, and we will forward more materials.

We know that it would be impossible to completely coordinate the administration of these instruments among the thirty participating schools. We do not expect that the teachers administer them at the same time on the same day. As a matter of fact, it is our belief that the results would be better if the instruments were administered over a longer period. Therefore, we hope that you can administer these to your junior and senior vocational agriculture students between the dates of December 9 to January 17. Because of differing lengths and time of class periods among the schools, we are not attempting to coordinate any more than the order of instrument administration. Please fit our suggestions as best you can into your own situation.

We suggest that the instruments be administered on five different days. The first should be the questionnaire, followed by the four parts of the achievement test in the following order: (1) Animal Science, (2) Plant and Soil Science, (3) Mechanics, and (4) Management. The questionnaires will not take as long as the achievement tests, but we hope that you will make sure that all items are completely answered. Each of the parts of the achievement test will take approximately fifty minutes, forty minutes of which will be allowed for actual testing.

Enclosed you will find a sheet labeled "Test Administration." This contains the complete set of standardized directions for the administration of the Agri-Business Achievement Test. The paragraphs starred (**) are to be read aloud to the students. Although any soft leaded pencil may be used to mark the answer

sheets, we have included pencils for your convenience. Please do not allow the students to use pens.

After all of the instruments have been completed by all of your junior and senior students in vocational agriculture (which will hopefully be on or before January 17), please return the test booklets, answer sheets, and completed questionnaires in the self-addressed, stamped envelop which we have included. We would like for you to keep one copy of the test booklet for your reference. The answer sheets will be scored and results will be made available to you as soon as possible. You may want to use the results of these achievement tests as a teaching-learning situation.

To reiterate, you might find the following helpful:
Check List of Data Collection:

_____(1) Administer the instruments, both the questionnaire and the achievement test to your high school junior and senior vocational agriculture students sometime between December 9 and January 17.
_____(2) Administer questionnaire - Will take approximately 30 minutes.
_____(3) Have each student complete the Name Block, Grade, Sex, Birth Date, and School information on his answer sheet. Specific directions for this are given in "The Pre-Test Session" part of the Test Administration directions.
_____(4) Administer the Achievement Test - Probably four different days would work best.
  a) Animal Science Test - Allow approximately fifty minutes
  b) Plant and Soil Science Test - Allow approximately fifty minutes
  c) Mechanics Test - Allow approximately fifty minutes
  d) Management Test - Allow approximately fifty minutes
_____(5) Return Test booklets, answer sheets, and completed questionnaires to the Agricultural Education Department, Iowa State University.
_____(6) Review Test results with your students - Sometime in February.

If you have any question, please call. We will be anxiously awaiting your completed instruments.

Sincerely,

Harold R. Crawford	Bennie L. Byler	Tom Archer
Professor and Head Agricultural Education	Assistant Professor Agricultural Education	Graduate Assistant Aricultural Education

TA/lra

Encl.

P.S. The information collected from the questionnaires and instruments will remain confidential and will be reported in summary form only. Comparison among schools will not be made.

III.

Test Administration

These are the complete set of directions for the administration of the Agribusiness Achievement Test. The paragraphs starred (**) are to be read aloud to the studnets. Note - Some of the starred paragraphs contain directions inside parentheses, which are not to be read to the students.

THE PRE-TEST SESSION

** "On _____, you are going to take the *Agribusiness Achievement Test,* which is part of a series called the *Content Evaluation Series.* You should do your best on this test because it will help you to learn how well you are doing in your study of agriculture, specifically in the areas of _____ (name(s) of subtest(s) to be administered). It will also give your teachers and the school a clearer picture of your progress and the areas in which you might need more help."

Having informed students of the nature and purpose of the test, the examiner should distribute the answer sheets.

** "The forms that I am distributing are the answer sheets which you will use for marking your answers to the questions on the test. Please do not write anything on your answer sheet until you are told to do so."

When the answer sheets have been distributed, continue as follows:

** "Place your answer sheet sideways on your desk so that the words NAME BLOCK face you. (Demonstrate.) You must use a black lead pencil; if you do not have one, raise your hand and I will give one to you. In the blank at the right headed 'PUPIL,' print your last name, add a comma, and then print your first name and middle initial. (Pause.) In the blank next to 'SCHOOL,' print the name of our school. (Remind students of the proper name of the school that they are to use.) Next, in the blanks next to 'CITY' and 'STATE,' print the city and state in which our school is located. Then, in the blank next to 'TEACHER,' print my name. (That is, if the test administrator and the teacher of the course are the same.) Finally, in the blank next to 'GRADE,' print the number of your grade.

** "Your answer sheet will be scored by a machine that will also read and copy your name from your answer sheet. You must record your name in the NAME BLOCK. Notice the row of boxes across the bottom of the NAME BLOCK. In the first box in that row print the first letter of your last name. In the second box print the second letter, and so on until your last name is spelled out completely. Then skip one box and begin to print your first name. If there are enough boxes, finish your first name, skip one box, and print your middle initial. If there are not enough boxes, print as much of your name as you can in the order stated.

** "Above each box containing a letter of your name is a column with all the letters of the alphabet. Begin with the box containing the first letter of your last name. Find the same letter in the alphabet column directly above it, and blacken the oval containing the letter. (Pause.) Follow this same procedure for each of the remaining letters of your last name. If you make a mistake, erase the mark completely and blacken the proper oval.

Circulate among the students to give help where it is needed. Then continue:

** "Note that you have left an empty box between your last name and your first name. Blacken the empty oval at the very top of the column directly above that *empty box*. (Pause.) Next, blacken the proper ovals in the alphabet columns directly above the letters of your first name. (Pause.) If there is one, blacken the empty oval above the blank box after your first name. Next, blacken the proper oval in the alphabet column above the box containing your middle initial. *If there are any empty boxes after your name, blacken the blank oval at the top of the column directly above*

each of those empty boxes. If you have any questions about blackening the proper oval, raise your hand and I will help you."

When the students have completed marking the NAME BLOCK, continue as follows:

** "At the right of the NAME BLOCK you will see a column headed 'GRADE.' In that column, find the number of your grade (9, 10, 11, or 12) and blacken the oval beside it. (Pause.)

** "In the column headed 'SEX,' blacken the oval above the M if you are male, and the oval above the F if you are female. In the 'DATE OF BIRTH' box, blacken the ovals in the column headed 'MO.' that correspond to the number of the month of your birth, and in the 'YR.' column, blacken the ovals that correspond to the last two numbers of the year of your birth.

** "Do not make any marks in the 'OTHER INFORMATION' box."

When the students have blackened all of the appropriate ovals, collect the answer sheets in such a way that they can be redistributed quickly on the day of the test.

DIRECTIONS FOR ADMINISTRATION

On the day of the test, before class begins, write the words "START" and "STOP" on the board for timing the test. Next distribute the answer sheets, making sure that each student receives the one bearing his name. When the answer sheets have been distributed, comment as follows:

** "Today you are going to take the _____ (name of subtest(s)) subtest(s) of the *Agribusiness Achievement Test.* It is/They are designed to tell us how well you are developing your knowledge, understanding, and skills in agriculture. When you get your test booklet, please do not open it until I ask you to do so."

Distribute the test booklets. At the same time, distribute scratch paper. When the test booklets have been distributed, say:

** "The (first) test you will take today is in the area of _____ (name of subtest). Please turn to page ____ of your test booklets. Note the section headed 'DIRECTIONS.' Please read that section."

(This section is reprinted here so that the test administrator may read it aloud.)

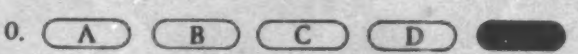
DIRECTIONS: The purpose of this test is to find out how well you are developing your knowledge, understanding and skills in the area of _____ (name of subtest). The test contains exercises for which five answers are provided. Read each exercise and decide which answer is correct or clearly better than the others. Then, on the answer sheet mark the space which corresponds to the answer you have chosen. The sample at the right is an example of the exercises which you will find on the test. The answer has been marked correctly.

SAMPLE (Animal Science)

0. The following name which does not refer to a breed of dairy cattle is

A. Jersey.
B. Guernsey.
C. Brown Swiss.
D. Ayrshire.
E. Dorset.

ANSWER

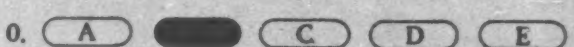


SAMPLE (Plant and Soil Science)

0. That science which treats of the relationships between organisms and their environments is called

A. ethnology.
B. ecology.
C. sociology.
D. anthropology.
E. astronomy.

ANSWER



SAMPLE (Mechanics)

0. In an internal combustion engine, fuel and air are mixed in the

A. distributor.
B. crankshaft.
C. carburetor.
D. manifold.
E. generator.

ANSWER

SAMPLE (Management)

0. Basically, the success of a farm business is dependent upon

A. import-export policies.
B. economic conditions.
C. price cycles.
D. sound management.
E. weather.

ANSWER

0. (A) (B) (C) ■ (E)

** "You are not expected to be able to answer all of the questions correctly. If you cannot decide on an answer, pick the most reasonable answer you can, and move along to the next question; do not spend too much time on any one question. If you have time at the end of the test, go back and check the more difficult questions. Your score will be based on the number of questions you answer correctly; therefore, it is to your advantage to answer every question."

After a two-minute pause while the students read the directions, say:

** "I will warn you after thirty minutes have passed so that you will know you have ten minutes left to complete the test."

Ask whether students have questions. Then say:

** "If you change your mind about an answer to a question, completely erase your mark in the oval you first blackened in answering the question. Then blacken the oval that represents the answer you want to give. Remember, do not fold or crease your answer sheet. Do not make any marks in your test booklet. Turn now to the next page of your test booklet and begin the test."

On the chalkboard, after the word 'START,' write the exact time that students begin the test. Add forty minutes. Then, after the word 'STOP,' write the time when students will be told to stop their work.

After thirty minutes have elapsed, say:

** "You now have ten minutes before the end of the test."

At the end of EXACTLY FORTY MINUTES, say:

** "STOP! Put your pencils down."

If this is the only subtest or the last subtest to be given, collect the answer sheets immediately, then the test booklets and other test materials.

If another subtest is to be administered, allow the students a short break. Then proceed with the next subtest as you did with the first. If two of the subtests are to be given back-to-back, it may be well to repeat the directions. Be sure that all of the students start each subtest at the same time.

APPENDIX E

TABLE OF MEANS AND STANDARD DEVIATIONS FOR PERSONAL, FAMILY, AND COMMUNITY VARIABLES

Table 86. Means and standard deviations for personal, family, and community variables

Variable	Student group[a]						Total	
	Group 1		Group 2		Group 3			
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Semesters of vocational agriculture completed.	5.57	1.53	5.43	1.84	5.35	1.72	5.42	1.69
Grades received in vocational agriculture.	4.36	1.63	3.09	1.60	4.94	1.65	4.46	1.77
Grades received in all courses.	4.99	1.45	3.74	1.40	5.56	1.37	5.09	1.55
Years of posthigh school education planned.	2.68	0.94	5.12	1.36	1.15	0.60	2.26	1.71
Amount of certainty that I will enter the occupation I have chosen.	6.79	2.41	6.36	2.60	7.10	2.54	6.89	7.53
Amount of thought I have given to my choice of occupation.	7.85	1.95	7.40	2.21	7.53	2.39	7.59	2.25
My ability for the occupation I have chosen.	7.68	1.85	7.71	1.96	7.86	1.97	7.79	1.93
Amount of work experience I have had in the occupation I plan to enter.	6.77	2.89	5.79	3.46	7.56	2.89	7.04	3.06
My knowledge of the occupation I plan to enter.	6.94	2.18	6.92	2.18	7.37	2.25	7.18	2.22
Value of my high school training for the occupation I plan to enter.	5.76	2.65	6.07	2.67	5.28	2.73	5.54	2.71

[a] Group 1 = Students who planned to attend a postsecondary area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.

Table 86 (Continued)

Variable	Student group[a] Group 1 Mean	S.D.	Group 2 Mean	S.D.	Group 3 Mean	S.D.	Total Mean	S.D.
Amount of training my high school has provided for the occupation I plan to enter.	5.03	2.57	5.38	2.83	4.79	2.83	4.96	2.77
Amount of encouragement received from my father to continue my education beyond high school.	6.11	3.15	7.02	3.16	3.25	3.13	4.68	3.53
Amount of encouragement received from my mother to continue my education beyond high school.	6.89	2.95	7.89	2.35	3.82	3.21	5.36	3.48
Amount of encouragement received from my father to attend a postsecondary area vocational school.	5.29	3.49	2.64	3.03	2.76	2.99	3.41	3.33
Amount of encouragement received from my father to attend a four-year college or university.	2.53	3.04	6.22	3.10	1.30	2.14	2.49	3.15
Amount of encouragement received from my mother to attend a postsecondary area vocational school.	5.29	3.24	2.81	2.97	2.23	2.71	3.15	3.18
Amount of encouragement received from my mother to attend a four-year college or university.	2.93	3.15	7.21	2.72	1.66	2.45	2.98	3.38
Amount of encouragement received from my vo-ag instructor to attend a postsecondary area vocational school.	3.75	2.78	3.23	3.10	2.67	2.69	3.06	2.83
Amount of encouragement received from my vo-ag instructor to attend a four-year college or university.	2.81	2.87	5.71	3.57	1.90	2.46	2.64	2.97

Table 86 (Continued)

Variable	Student group[a] Group 1 Mean	Group 1 S.D.	Group 2 Mean	Group 2 S.D.	Group 3 Mean	Group 3 S.D.	Total Mean	Total S.D.
Value of my high school vo-ag courses completed in preparing me for the occupation I plan to enter.	5.75	2.52	5.34	2.81	5.27	2.78	5.41	2.72
Value of the FFA program in preparing me for the occupation I plan to enter.	4.94	3.06	5.21	2.97	4.88	3.01	4.95	3.01
Value of my vo-ag courses completed in preparing me to attend a postsecondary area vocational school.	5.38	2.59	4.92	2.90	4.04	2.77	4.55	2.81
Value of my vo-ag courses completed in preparing me to attend a four-year college or university.	3.92	2.66	5.25	2.55	3.13	2.68	3.71	2.76
Value of my high school courses in preparing me to attend a postsecondary area vocational school.	5.65	2.35	5.44	2.64	3.88	2.73	4.63	2.75
Value of my high school courses in preparing me to attend a four-year college or university.	4.44	2.73	6.79	2.41	3.51	2.80	4.37	2.96
Value of my supervised occupational experience program (Supervised farming or agribusiness placement) in preparing me for the occupation I plan to enter.	5.75	2.79	5.37	3.14	5.05	3.18	5.29	3.09
My chances of success as a student if I were to attend a four-year college or university and study animal science.	4.37	2.86	6.64	2.47	3.57	2.73	4.32	2.94

Table 86 (Continued)

Variable	Student group[a] Group 1 Mean	Group 1 S.D.	Group 2 Mean	Group 2 S.D.	Group 3 Mean	Group 3 S.D.	Total Mean	Total S.D.
My chances of success as a student if I were to attend a four-year college or university and study plant and soil science.	3.86	2.72	5.71	2.46	3.13	2.57	3.78	2.75
My chances of success as a student if I were to attend a four-year college or university and study agricultural mechanics.	5.82	2.74	5.81	2.49	4.88	2.97	5.29	2.86
My chances of success as a student if I were to attend a four-year college or university and study agricultural management.	5.22	2.79	6.71	2.21	4.23	2.59	4.93	2.74
My chances of success as a student if I were to attend a postsecondary area vocational school and study animal science.	5.12	2.97	6.69	2.55	3.90	2.72	4.72	2.95
My chances of success as a student if I were to attend an area vocational school and study plant and soil science.	4.72	2.78	5.78	2.79	3.62	2.62	4.29	2.81
My chances of success as a student if I were to attend a postsecondary area vocational school and study agricultural mechanics.	6.98	2.34	5.95	2.54	5.51	2.96	5.98	2.80
My chances of success as a student if I were to attend a postsecondary area vocational school and study agricultural management.	6.28	2.61	6.72	2.40	4.70	2.80	5.48	2.82

APPENDIX F

TABLE OF MEANS AND STANDARD DEVIATIONS FOR AGRIBUSINESS ACHIEVEMENT TEST SCORES

Table 87. Means and standard deviations for agribusiness achievement test scores

Agribusiness achievement test	Student group[a] Group 1 Mean	Group 1 S.D.	Group 2 Mean	Group 2 S.D.	Group 3 Mean	Group 3 S.D.	Total Mean	Total S.D.
Animal Science	57.53	8.19	61.67	8.72	55.30	8.88	57.02	8.97
Plant and Soil Science	55.63	9.16	60.99	8.24	53.47	9.70	55.37	9.70
Agricultural Mechanics	59.56	8.92	61.39	8.78	58.46	8.89	59.27	8.93
Agricultural Management	58.48	9.74	63.21	9.68	56.47	10.54	58.20	10.46

[a] Group 1 = Students who planned to attend a postsecondary area vocational school.

Group 2 = Students who planned to attend a four-year college or university.

Group 3 = Students who planned to enter the world of work.